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East Europe Report

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1928

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EAST EUROPE REPORT

ECONOMIC AND INDUSTRIAL AFFAIRS

No. 1928

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BRIEFS

USSR-IRAN CONTRACT--The Soviet Union has received an order from Iran for the construction of an 800-MW power plant consisting of four 200-MW power units. The agreement also provides for the co-participation of Poland and Hungary in this construction. The future power plant will operate for the needs of the large industrial center arising around Isfahan. [Text] [Warsaw INWESTYCJE I BUDOWNICTWO in Polish No 6, Jun 79 p 30]

CSO: 2600

REPORT ON FULFILLMENT OF SIX-MONTH ECONOMIC PLAN

Sofia RABOTNICHESKO DELO in Bulgarian 26 Jul 79 pp 1-2

[Announcement of the Committee on the Unified System for Social Information of the Council of Ministers on the Implementation of the Unified Plan for the Socio-Economic Development of the Bulgarian People's Republic in the First Half of 1979]

[Text] The balance of the first 6 months of the anniversary year is fruitful and optimistic. The favorable trend of the successful implementation of the decisions of the 11th Party Congress and the National Party Conference is apparent in industry, agriculture, construction, transportation, and the other economic sectors. The results obtained in the first 6 months are yet another proof of the possibilities offered by the socialist system and the scope of the nationwide competition.

The plan for the first 6 months was overfulfilled for a number of indicators such as net output, social labor productivity, and profit per 100 leva of fixed capital. The program for the application of scientific and technical achievements in economic sectors in being successfully implemented.

Considerable gains have been achieved in industry in the first 6 months. The power, chemical, textile and construction materials industries are continuing to develop at a high pace. The better use of raw materials, materials, energy, and fuel by a high percentage of industrial enterprises is a major accomplishment.

Agriculture, construction, transportation, and communications have been characterized by their ascending development. The plan for the building of priority projects has been overfulfilled and productive capital worth about 1.4 billion leva has been completed.

A characteristic feature of the first 6 months has been the fast pace of foreign economic relations. Today's Bulgaria is a sought after partner and a major exporter of electric hoists, gas-operated lift trucks, timber processing machinery, and other goods shipped to close and distant countries.

Concern for the people is always in the center of the party's social policy. The semestrial figures prove this fact eloquently, yet once again. Compared with last year the average wage rose. Thousands of new housing units were completed and hundreds of seats in kindergartens were made available.

Such successes are pleasing. Along with them, however, some weaknesses have shown up. The plan for marketed commodities was not fulfilled. Some goods important to the national economy were not produced, such as pig iron for processing, lathes, power transformers, carbamide, etc. The rhythm of raw material and material supplies of a number of enterprises was disturbed. The housing construction plan was not fulfilled.

The time remaining until the end of the year must become a time of new striving and new gains for upgrading the effectiveness and quality of output. Every individual worker and each collective must make their proper contribution in honor of the freedom anniversary.

The labor collectives extensively developed the nationwide socialist competition for the fulfillment and overfulfillment of the plan and of the tasks set at the National Party Conference. Successes were achieved in upgrading production effectiveness and quality.

The fulfillment of the plan for the first half of the year in terms of basic indicators was the following:

- net output: 102.1 percent;
- net output per 100 leva fixed capital: 104.7 percent;
- social labor productivity: 103.7 percent;
- profit per 100 leva productive capital: 106.6 percent;
- marketed commodities: 98.6 percent;
- delivery of goods for export: 101.0 percent.

A total of 1 billion 92 million leva, or 53 percent of the overall volume of capital investments, was used for modernization, reconstruction, and expansion of production capacities.

The plan for the utilization of scientific and technical achievements in the national economic sectors in the first half of the year was fulfilled 105.7 percent. A total of 1,975 assignments were implemented rather than 1,868 as planned. A total of 375 new and improved goods, 469 new and improved technologies, 115 designs for automated systems, 383 new and improved plant strains, etc. were applied. Regardless of the good achievements, however, the development of new and improved goods and technologies remains insufficient.

I. Industry

Compared with the same period of 1978, in the first half of 1979 industrial output rose 6.7 percent. The 6-month plan was overfulfilled. During the period 48.7 percent of the annual output was produced.

	Measure	Commodities produced in first half of 1979	Percentage of fulfillment of semi-annual plan	First half of 1979 in percentages of first half of 1978
Electric power	Million kwhr	16404	100.7	105.7
Pig iron for processing	Thousand tons	758	99.0	95.6
Steel in ingots	" "	1276	100.5	99.5
Rolled ferrous metals	" "	1539	101.2	99.5
Lathes	pieces	3371	82.6	95.4
Gas operated lift trucks	"	10237	104.7	93.2
Fork lift trucks	"	24722	97.9	105.3
Electric hoists	"	58094	100.9	101.5
Electric motors	"	548777	95.2	93.3
Power transformers	"	3028	70.4	69.1
Typewriters	"	66421	96.3	95.4
Calcinated soda	Thousand tons	734	103.7	108.1
Sulfuric acid	" "	504	97.7	101.9
Nitrogen fertilizers (including carbamide)	" "	333	89.6	92.7
Cement	" "	7813	100.0	113.8
Round & cut lumber	Thousand cubic meters	1808	103.7	100.4
Paper	Thousand tons	155	101.1	109.2
Woolen fabrics	Thousand meters	16956	98.8	101.7
Cotton fabrics	" "	174477	101.9	98.3
Knit wear	Thousands	53559	100.1	100.9
Shoes	Thousand pairs	10754	102.1	97.5
Sterilized canned vegetables	Thousand tons	68	99.7	137.4
Meat	" "	213	100.0	105.6
Butter	" "	12	111.4	113.1
Yellow cheese	" "	13	109.8	116.3
Cheese	" "	57	115.7	118.7

In the first 6 months, as the result of the nonfulfillment of the plan for the production of some items important to the national economy a number of enterprises were not rhythmically supplied with the required raw and other materials and goods for the domestic market. The production of basic items must be increased, thus guaranteeing the fulfillment of the annual plan.

The fulfillment of the marketing plan, the growth rate of goods marketed, and the labor productivity by economic ministry or other departments were as follows:

	Percentage of fulfillment of semiannual plan for marketed goods	First half of 1979 in percent of first half of 1978	
		goods marketed	labor productivity
Ministry of Power Supplies	100.3	108.1	107.9
Ministry of Chemical Industry	100.0	109.2	107.5
Ministry of Forests and Forest Industry	101.6	102.7	106.7
Ministry of Machine Building	93.5	105.7	111.4
Ministry of Light Industry	100.2	104.5	125.9
Ministry of Electronics and Electrical Engineering	96.2	109.2	104.9
Ministry of Construction and Construction Materials	98.9	109.3	116.1
National Agroindustrial Union	--	106.4	110.9
National Transportation Complex	100.9	111.4	109.7
Ministry of Internal Trade and Public Services	101.2	106.5	108.2
Ministry of Metallurgy and Mineral Resources	100.6	102.7	115.7

A number of enterprises failed to fulfill their planned volume of industrial goods marketed as a result of which the marketing plan remained unfulfilled by 1.4 percent.

In the first half of the year a number of industrial sectors continued to develop at a high pace. The amount of goods based on increased output rose as follows: electric and thermal power, 9.5 percent; coal industry, 11.6 percent; chemical and rubber industries and construction material industry, 7.8 percent; textile industry, 6.5 percent; and food industry, 8.6 percent.

Production effectiveness continued to rise. Labor productivity, measured in terms of net output, rose 11.5 percent; 91 percent of the increase in net output was the result of higher labor productivity.

In the first 6 months the plan for reducing the cost of industrial output was fulfilled. Most industrial enterprises made better use of raw materials, materials, fuels, and energy.

II. Agriculture

In the first half of this year the National Agroindustrial Union developed a better organization for the timely and qualitative implementation of agrotechnical measures for raising farm crops.

The material and technical base of agriculture broadened. Systems for the irrigation of yet another 36,000 decares of farm land were built. A total of 425,500 tons of chemical fertilizers (in terms of pure substance) were supplied. The volume of mechanized operations increased. The spring sowing was completed within a shorter period of time.

Compared with the first 6 months of last year, the public farms produced the following additional amounts of milk and eggs:

	Measure	Reported first half of 1979	Percentage fulfillment of annual plan	First half of 1979 in percent of first half of 1978
Production of:				
Milk - totals	Thousand liters	855941	55.3	111.8
Including				
Cow	"	700022	51.3	113.4
Goat	"	153881	87.1	105.2
Eggs	Thousands	546820	51.4	107.1
Average Productivity per:				
Fodder-fed cow	Liters	1463	52.8	110.6
Laying hen	Number	103	50.2	102.0

The number of farm animals and poultry in the public farms rose as follows:

	Thousands on 1 July 1979	Number on 1 July 1979 in percent of 1 July 1978
Cattle	1453	102.1
Including cows	495	102.0
Hogs	2854	105.7
Including breeding sows	227	103.7
Sheep	8286	101.8
Poultry	25888	98.4
Including laying hens	5160	103.1

III. Construction

In the first half of the year the construction and installation organizations carried out construction work worth 1 billion 175 million leva. They fulfilled their plan 98.1 percent; compared with the same period in 1978 the volume of construction rose 7.8 percent.

The overall plan for the construction of priority projects was fulfilled 101.3. percent. Productive capital worth 1 billion 390 million leva was completed and delivered for use.

In the first half of the year the following projects were completed: a catalytic reforming system in Pleven; facilities for the production of phthlic anhydride at the G. Genov plant in Ruse; the expansion and modernization of the Veslets pig iron casting plant in Vratsa; the aluminum castings plant in Pleven; the second unit at the Maritsa-Iztok III TeTs, etc.

In the field of state and corporate-group housing construction, construction and insulatin work worth 216 million leva was carried out or 9.2 percent compared with the same period in 1978. The semiannual plan remained underfulfilled by 6.4 percent.

IV. Transportation and Communications

In the first half of the year the plan of the public use transportation system for income from hauling, loading and unloading, and shipping activities was fulfilled 98.4 percent.

Compared with the same period in 1978 income rose as follows: rail transpors, 0.5 percent; domestic haulage automotive transportation, 3.7 percent; and transportation by water, 14.1 percent.

The plan for labor productivity in transportation was fulfilled. Compared with the first half of 1978 labor productivity rose 0.7 percent.

An income of 129 million leva was earned from communications services whose semiannual plan was fulfilled 103.9 percent. Compared with the same period of 1978 revenue increase totaled 10.7 percent.

In the first half of the year another 43,078 telephone sets were installed, of which 29,681 were for home use. A total of 233 new telex centers, and 10 new postal telegraph and telephone stations were opened. One radio relay center and 21 television relay stations were completed.

Regardless of the good achievements, the needs of the national economy and the population for telephone services remain unsatisfied. The quality of communications services is not on the necessary level.

V. Foreign Economic Relations

In the first half of the year our foreign economic relations continued to develop at a fast pace. Foreign trade reached 7 billion foreign currency leva or 15.9 percent above the same period in 1978. More fork lift trucks, electric hoists, gas operated lift trucks, electric motors, tractors, silage combines, tractor sowing machines, planting and transplanting machines, telephone sets, radio telephones, timber processing machines, calcinated soda, etc., were sold. Machines and equipment accounted for 47.6 percent of the total volume of exports.

Most of the foreign trade was with the USSR and the other CEMA-member countries.

Our foreign trade relations with developed and developing countries progressed favorably as well.

VI. Living Standard

Compared with the first half of 1978 the average wage in economic complexes, ministries, and departments rose 2,9 percent.

In the first half of the year retail trade totaled 4,710,300,000 leva, thus overfulfilling the plan by 0.4 percent. Compared with the first half of 1978 retail trade rose 1.3 percent (0.9 percent in the trade network and 3.1 percent in public catering).

The volume of industrial goods produced on the basis of population orders rose 3.6 percent compared with the same period of 1978; however, the availability of industrial services to the population declined 2.9 percent.

Along the lines of state, cooperative, and individual housing construction, 22,185 housing units were completed and delivered. New kindergartens for 3,518 children and nurseries totaling 580 beds were delivered. (BTA)

5003
CSO: 2200

ORDINANCE CONCERNING SALE AND ACCOUNTING OF FUEL

Sofia DURZHAVEN VESTNIK in Bulgarian 27 Jul 79 pp 625-630

[Ministry of Chemistry, Ministry of Finance, and Committee for the Unified Social Information System Ordinance No 1 on the Sale and Accounting of Petroleum Products]

[Text] Chapter One

General Stipulations

Article 1. The present ordinance shall determine the means and procedure for the sale and accounting of petroleum products purchased from the gasoline stations of the Petrol DSO [State Economic Trust], as well as the quantities received and used by departmental gas stations.

Article 2. (1) The Petrol DSO gas stations shall sell petroleum products to departments, and state and public organizations against limited checks at prices approved by Order No Ts-20, dated 20 February 1979, of the Main Administration for Prices of the State Committee for Planning, in accordance with the limits set for the consumers and the technical characteristics of the state motor transport vehicles and to the population, foreign tourists, and foreign trucks, against payments in leva in cash or checks issued by the State Savings Bank based on the uniform state retail prices approved with Decree No 23 of the Council of Ministers of 1979 on additional savings of energy and fuels (DV No 41, 1979).

(2) Organized foreign tourists using motor vehicles may purchase petroleum products also against special bonds with a certain value discount.

(3 The sale of petroleum products for motor vehicles owned by the diplomatic corps in the country will be against leva in cash and a counterfoil for which a receipt shall be issued and, to the UBO [Coastal Defense Administration] and BCP Central Committee, against submitted receipt for received petroleum products and a receipt issued for payment on account.

Article 3. The Petrol DSO shall fuel motor vehicles of departments and state and public organizations with colored A-83 gasoline from red-colored pumps, following the procedure and within deadlines stipulated in Council of Ministers Decree No 28 for 1979 on lowering outlays of liquid fuels in public and departmental transportation (DV, No 55, 1979).

Article 4. Metrological control shall be exercised by the Petrol DSO in the sale of petroleum products in accordance with the stipulations of BDS [Bulgarian State Standard] 11825-1974. When petroleum products are shipped from the petroleum bases to the gas stations and the final recipients their relative weight shall be measured with an aerometer twice daily--at 0800 and 1300 hours.

Article 5. The sale of petroleum products in the country for trucks and buses owned by foreign international vehicle transportation systems shall be based on the procedure stipulated in Article 6, paragraph 7, of Council of Ministers Decree No 58 of 1978 on exercising a strict regime of savings of liquid fuels and electric power (DV, No 4, 1979), and Article 22 of Council of Ministers Decree No 28 of 1979 and Article 19 of the present ordinance. The Customs and Customs Control Directory of the Ministry of Finance shall provide the necessary customs control.

Chapter Two

Reception, Storage, and Sale of Limited Checks, Bonds for Foreign Motor Tourists, Counterfoils for the Diplomatic Corps, and Limit Cards for Foreign Trucks by the Petrol DSO

Article 6. (1) Limited checks and bonds shall be considered securities with a specific nominal value, recorded separately and for one time use.

(2) The printing of limited checks, bonds for organized foreign motorized tourists, counterfoil for the diplomatic corps, and limit cards for the sale of petroleum products to foreign trucks shall be the prerogative of the Petrol DSO. The printing will be based on procedure governing state securities and under the supervision of the Ministry of Finance.

(3) Limit checks shall be printed on a monthly and quarterly basis, colored according to the petroleum product, and bound in stubs. The checks shall carry the following printed information: type of product, liters and their value based on the uniform state retail prices as approved with Decree No 23 of 1979. According to need, the limit checks of one stub may be divided into several smaller stubs which must be bound and signed and sealed by the corresponding materially responsible individual issuing the limit checks. Five liter limit checks may be used only for fueling motorcycles and motor scooters and for topping public and departmental motor transport vehicles.

(4) Limit checks, bonds for foreign motorized tourists, counterfoils for the diplomatic corps and limit cards for foreign trucks shall be printed by the Todor Dimitrov State Printing Press on the basis of requests submitted and the special forms of the Petrol DSO.

Article 7. (1) The printed securities shall be accepted by the materially liable official of the Petrol DSO in the presence of a representative of the Ministry of Finance. They shall be accepted on the basis of the number of packages, the figure entered in the excise label certifying to the number of stubs, series and individual numbers, kind, amount of liters, and cost of petroleum products. The financial control of the printing press shall issue an accompanying letter submitted to the materially responsible official of the Petrol DSO. Such securities shall be signed and countersigned by officials delivering and accepting them.

(2) Packages of securities whose wrapping has been damaged shall be accepted from the printing press by the materially liable person following a check of their content in the presence of a commission which, should difference of opinion arise, shall draw up a protocol based on a Petrol DSO approved form.

(3) The Petrol DSO shall supply its branches with limited checks through its central warehouse in Sofia, on the basis of advance requests. The transfer of limit checks from one branch to another may be made on the basis of Petrol DSO instructions.

(4) The Petrol DSO will issue its branches limit checks based on account sheets containing the numbers of stubs, series, and numerical sequence, types of petroleum products, number of liters, and their cost.

(5) Limit checks received by the Petrol DSO and their submission to its branches shall be based on the nominal value. They shall be recorded on a nonbalance sheet basis as blanks and subject to a separate accounting procedure.

Article 8. (1) The Petrol DSO shall issue the bonds for organized foreign motorized tourists to the Shipka tourist agency of the Bulgarian Automobile Association and the Balkanturist TK [Tourist Combine] State Committee for Tourism, on the basis of advance requests. The submission list shall indicate series, numbers, and liters printed on the bonds.

(2) The Petrol DSO shall submit the counterfoils allocated to the diplomatic corps on the basis of a protocol.

(3) The procedure for issuing limit cards to drivers of foreign trucks entering the country shall be determined by the Customs and Customs Control Directorate and the Petrol DSO.

Article 9. At the end of each month the data registered in accountability books on the movement of limit checks and bonds shall be compared with the records kept by the materially liable individual. In cases of discrepancies the errors must be discovered and corrected in terms of the current month. The balance shall be accepted through the reciprocal initialing of the balance shown on the cards.

Chapter Three

Sale of Limit Checks by Petrol DSO Branches to Departments and State and Public Organizations

Article 10. (1) The allocation of limit checks for petroleum products to departments and to state and public organizations shall be within the limits of their quarterly plan for fuels and lubricants but not for more than one month or for less than their 6-day requirements, against the presentation of a letter indicating the type, number of stubs, liters, and the nominal cost indicated on the limit checks for petroleum products. A reference-statement shall be added to the letter on the allocation of motor vehicle gasoline by octane number in accordance with the technical characteristics of the various types of motor vehicles.

(2) Limit checks allocated to consumers shall be submitted only to customer authorized materially liable individuals.

(3) Limit checks for petroleum products supplied by the gas stations of the Petrol DSO shall be issued to the branches of the Ministry of Transportation, Ministry of Construction and Construction Materials, National Agroindustrial Union, and Central Cooperative Union for no more than 20 percent of the established annual ceiling for transportation purposes.

(4) Within the limits of saved petroleum products, in accordance with the preceding paragraph:

1. The Petrol DSO may allocate in advance, in addition to the stipulated ceilings in the contracts for the corresponding quarters, on a cumulative basis starting with the beginning of the year, liquid fuels issued to consumers within the limits of the annual ceiling, at double the retail price;

2. Should the stipulated annual limits be reached, additional limits may be set only by the balancing organ. Liquid fuels shall be sold to the consumers at twice the retail price;

3. The difference between the doubled price and the respective wholesale or retail price of quantities of liquid fuels sold in excess of the contractually stipulated quarterly amounts shall be deposited by the Petrol DSO branches as republic budget revenue;

(3) New stubs of limit checks shall be granted to drivers of motor vehicles against submission of used stubs of limit checks with all data properly entered.

(4) Unused stubs of limit checks shall be accepted by the materially liable individual who shall issue a proper document to this effect.

(5) The transfer of stubs of limit checks among drivers of the motor vehicle or among organizations is forbidden.

Article 14. (1) Used stubs of limit checks shall be kept by the materially liable individual for 3 months after which they shall be destroyed by the internal commission of the customer.

(2) The value of the unused limit checks or available amounts of petroleum products within the vehicle, as established in the course of inventory taking at the end of the month, shall be deducted from the accounts showing operational and other expenditures and entered in account No 318 "Limit Checks for Petroleum Products, Postal Stamps, etc.," or respectively, account 130 "Fuel," in the separate entries for motor vehicles.

Chapter Five

Sales of Petroleum Products by Gasoline Stations of the Petrol DSO to State and Public Organizations

Article 15. (1) The sale of petroleum products by the Petrol DSO gasoline stations shall be against presentation of clean and undamaged limit check stubs.

(2) The limit checks shall consist of two parts. One part shall be retained by the motor vehicle drivers; the other part shall be submitted to the gas station for accounting purposes.

(3) The text of both parts of the limit check must be identical with the exception of the following sentence in the part kept by the driver: "Gasoline recorded in the travel sheet," and the date and the signature of the materially liable individual who has accepted the travel sheet.

Article 16. (1) The driver of the motor vehicle shall enter in advance in the limit check the number of the motor vehicle he is fueling and the number of the travel sheet. Receiving the petroleum products from the gas station the driver shall present the stub of limit checks and sign both check sections.

(2) The seller shall stamp the number of the gas station and of both sections of the limit check, enter the date, and sign, after which he shall remove the part to be retained by the gas station to be submitted for accountability purposes to the Petrol DSO and shall return the stub of limit checks to the vehicle driver.

4. Should the allowed overexpenditure of liqued fuels be balanced in subsequent accounting periods, the price differentials paid by the respective consumers shall be refunded by the budget in accordance with the procedure and methods stipulated by the Ministry of Finance.

Article 11. (1) Bills shall be submitted by the Petrol DSO departments for limit checks sold to departments, state, and public organizations. Payments of such bills shall be based on the following procedure:

1. By state and cooperative economic organizations and their branches: endorsement of the payment request. The payment document shall expressedly stipulate that such payment is made for the purchase of limit checks, indicating the number of the collection account for said limit checks at the corresponding bank branch;

2. By budget-supported institutions and public organizations: advance payments with a payment order. Limit checks shall be delivered by the Petrol DSO branches against the presentation of a bank statement certifying to the payment of their nominal cost.

(2) Funds earned from the sale of limit checks shall be deposited in the special frozen account in the Bulgarian National Bank.

Chapter Four

Accountability for Limited Checks by Departments, and State and Public Organizations

Article 12. (1) Limit checks shall be kept by specially appointed officials, in a steel safe or cash register.

(2) Individuals materially liable for limit checks shall keep records by type of petroleum product indicating the number of stubs, liters, cost, series, and the numbers. Income entries shall be made for the current month on the basis of data contained in warehouse receipts issued for bills submitted by the Petrol DSO branches.

Article 13. (1) Drivers of motor vehicles shall be issued limit checks in entire stubs against requests validated by the specially assigned official. The request must include the following data: type and license of motor vehicle, full name of driver, allowed amount, number of stubs, type of fuel in liters, and the series and numbers of limit checks.

(2) The materially liable individual shall be in charge of issuing the allocated number of stubs of limit checks to drivers of motor vehicles. Such individuals shall sign and seal the stubs using the seal of the department or organization and enter the data in a special record book. The entry on the driver shall also include the series and numbers of received limit checks.

(3) The issued petroleum products must be fully consistent in terms of kind, liters, and value of limit checks received. Substitution of petroleum products stipulated in the limit checks is forbidden.

(4) Whenever a motor vehicle leaves or returns to the garage the respective official must mandatorily enter in the travel sheet data on kilometers traveled and not the fuel received and used that day.

Article 17. (1) It is forbidden to allocate petroleum products to the population or to foreign motor tourists against limit checks used by departments and state and public organizations.

(2) The sale of petroleum products in cans or other containers to departments, and state and public organizations is forbidden.

(3) Should the quantity indicated in the submitted limit check exceed the capacity of the motor vehicle's tank, the driver shall enter in a special notebook in the gas station the nonreceived amount. Should he refuse to do so, the seller shall enter it in the shift report sheet as surplus to be paid to the republic budget as revenue.

(4) The purchase and sale of securities related to petroleum products both among state and public organizations as well as among individuals is absolutely forbidden.

Chapter Six

Sale of Petroleum Products to the Population, Foreign Motorized Tourists, Foreign Trucks, Diplomatic Corps, UBO, and BCP Central Committee

Article 18. (1) The population and foreign motor tourists shall purchase petroleum products from the Petrol DSO gas station with the exception of diesel fuel oil (household gas oil) in cash leva. They may purchase petroleum products in metal containers as well.

(2) The gas stations shall charge no fee for changing the oil of a privately owned motor vehicle if the used oil is returned to the station. Owners of private motor vehicles shall pay the price of the new oil only.

(3) The Petrol DSO shall allocate the Shipka tourist agency for sale to organized foreign motorized tourists gasoline at retail prices as approved with Decree No 23 of 1979, with a 30 percent discount; diesel fuel shall be allocated with a 10 percent discount. The Shipka tourist agency shall sell liquid fuels to organized foreign motor tourists against bonds in foreign currency. The gas station personnel shall issue gasoline and diesel fuel to the organized foreign motor tourists in accordance with the amount entered in the special bond which shall be sealed and carry the date of sale, stamping on it the number of the gas station, and entering the date of the fueling and signature.

(4) The Petrol DSO shall issue the Balkanturist TK, for sale to foreign motor tourists liquid fuels at retail prices approved with Decree No 23 of 1979 at no discount. The gas station personnel shall grant liquid fuel to foreign motor tourists as stipulated in the special bond "B," which must be sealed and dated. The bond shall be stamped with the number of the gas station, entering the date and signing it.

Article 19. (1) Foreign trucks shall be supplied fuel on the basis of a limit card, not to exceed 250 liters per fueling by the Petrol DSO gas stations. The limit card shall be issued by the customs organs at the border points which shall enter the date, stamp their seal or the seal of the corresponding customs office, and sign.

(2) Drivers of foreign trucks and passenger cars may be sold liquid fuels at retail prices as approved with Decree No 23 of 1979.

(3) Fueling foreign trucks, the attendant at the gas station shall enter in the front part of the limit card the license plate of the vehicle, the date, and the seal of the gas station and his signature. The limit card shall be kept by the gas station for accountability purposes in settling accounts with the respective branch of the Petrol DSO.

Article 20. (1) Drivers of diplomatic motor vehicles shall be supplied with petroleum products by the gasoline stations of the Petrol DSO.

(2) Diplomatic and councilor missions in the Bulgarian People's Republic and their personnel may purchase all types of gasoline for official or privately owned motor vehicles with special counterfoils, paid in cash at standard retail prices as per Decree No 23 of 1979 with a 30 percent discount. Diesel fuel and fuel oil for household purposes shall be sold at retail prices with no discounts.

(3) Drivers of XX license plate motor vehicles shall also submit to the attendant a special white card signed and sealed by the Petrol DSO and the Bureau for Services to the Diplomatic Corps, certifying that the motor vehicle is used for official purposes only.

(4) The diplomatic corps shall obtain its counterfoils from the Bureau for Services to the Diplomatic Corps.

(5) The gas station attendant shall issue a receipt, one copy of which shall be submitted for accountability purposes to the motor vehicle driver or the driver of a motor vehicle temporarily operated in the country; the second copy shall be used for settling accounts with the respective branch of the Petrol DSO.

Article 21. Petroleum products for motor vehicles of the UBO and the BCP Central Committee shall be sold by the gas stations of the Petrol DSO against a receipt for obtained petroleum products. At the end of the shift the attendant shall make a total bill. The UBO and BCP Central Committee shall periodically transfer funds to the respective Petrol DSO branch.

Chapter Seven

Accounting Sales of Petroleum Products by Bases and Gasoline Stations of Petrol DSO Branches

Article 22. (1) Ministries, other departments, executive committees of [illegible] councils, and the Sofia Obshtina People's Council, and the managements of public organizations owning motor vehicles shall break down their annual allocated amounts for liquid fuels for motor vehicles quarterly and by final user. The final users shall declare to the Petrol DSO branches the amount of their allocated annual and quarterly ceilings for deliveries from the warehouse and with limit checks.

(2) The Petrol DSO bases shall keep analytical records of liquid fuels sold from warehouses to consumer departments.

(3) The liquid fuels sold with limit checks shall be entered by the Petrol DSO gasoline stations in the shift accounts kept for the individual consuming departments on a daily basis. The gasoline bases shall total up liquid fuels sold by the gasoline stations by individual consuming department.

(4) The Petrol DSO branches shall sum up the information provided by the bases on liquid fuels sold to the individual consuming departments from the warehouse and with limit checks and draw up monthly and quarterly reports on the fulfillment of the sales plan using form MS-Sales (1-RP).

(5) The Petrol DSO shall sum up the information supplied by the branches on liquid fuels sold to the individual consuming departments from the warehouse and with limit checks and draw up monthly and quarterly reports on the implementation of the marketing plan using form MS-Sales (1-RP) which shall be submitted to the Committee for the Unified Social Information System.

(6) For purposes of accountability as stipulated in the preceding paragraph, the end customers shall stamp the code number of the department as indicated in form 1-RP, on each limit check at the time of its delivery to the driver of the motor vehicle.

(7) Limit checks partially or improperly filled as per the present ordinance shall be considered invalid and shall not be accepted by the gasoline station for fueling and accounting purposes.

Article 23. (1) A daily report by gasoline pump and type of petroleum product shall be drawn up for sales of petroleum products by gasoline stations, covering the following items:

1. Sales paid for with limit checks;

2. Sales in cash to the population, foreign motor tourists, and foreign trucks;

3. Sales with vouchers for the diplomatic corps, the UBO, and the BCP Central Committee.

(2) Used limit checks, bonds, and receipts shall be sorted by type and amount of petroleum products in accordance with the sales by individual gas pump and shall be collected in batches of 100 items. The number of the gasoline station shall be entered on the binding tape of the bundle.

(3) The report along with the used limit checks, bonds, receipts, and cash shall be submitted daily by the shift managers to the cashiers of the respective branch or base of the Petrol DSO.

(4) In the case of out of the way gasoline stations, according to a list approved by the branch director, a longer accountability period may be allowed with the approval of the corresponding bank branch.

(5) Following their checkup, the cashiers of the Petrol DSO branches shall submit the reports, used limit checks, bonds, and receipts to the controllers of the second securities control service. A list-account for submission and acceptance shall be drawn up.

Article 24. (1) On the basis of the second control conducted within 10 days the Petrol DSO branch shall submit to the Bulgarian National Bank a payment request for transferring the value of the used limit checks and bonds from the special frozen account in the Bulgarian National Bank to the turnover borrowing account.

(2) Used limit checks, bonds, and receipts checked and accepted by the second control organs in charge of securities shall be stored in special premises or steel safes and registers. They shall be destroyed at the end of each quarter through melting in a paper pulp factory or, on an exceptional basis, by burning by a commission appointed by order of the director of the respective branch in the presence of a representative in charge of securities of the Petrol DSO. An official document and list shall be drawn up of the destroyed used limit checks, bonds, and receipts.

Article 25. (1) Accounting for sold petroleum products by the gasoline stations of the Petrol DSO shall be separate for:

1. Sales to departments, and state and public organizations;

2. Sales to the population, foreign motor tourists, and foreign trucks.

(2) Used limit checks received by the Petrol DSO branches shall be recorded on a post balance basis until their destruction.

Chapter Eight

Receiving and Allocating Petroleum Products the Departmental Gasoline Stations

Article 26. (1) Departmental gasoline stations shall receive petroleum products from the basis and warehouses of the Petrol DSO against a bill in which the sold amount shall be entered in kilograms and liters.

(2) The gasoline station manager shall issue a warehouse receipt in two copies entering the number of kilograms and liters. He shall keep one copy while the second shall be used for bookkeeping purposes.

Article 27. (1) Petroleum products shall be allocated against the submission of a travel sheet in which the manager of the gasoline station shall record the allocated fuel in liters, enter the date of the fueling, and sign and stamp the travel sheet. The motor vehicle driver shall sign for the quantity of fuel received.

(2) The manager of the gasoline station shall enter in a special form the license of the vehicle, the full name of the driver, the date of charging and the type of fuel used in liters. The form shall be filled and signed by the vehicle driver in two copies--one for the manager and the second for bookkeeping purposes.

(3) Should the driver of the motor vehicle be traveling on an official assignment, the vehicle may be fueled by another gasoline station of the same department.

(4) At the end of the month the fuel received and pumped by the gasoline station is totaled up.

Article 28. (1) By permission of the superior organization, economic organizations and establishments with their own departmental gasoline stations may allow their use by other economic organizations.

(2) Limit checks may not be used in departmental gasoline stations.

Concluding Stipulations

#1. The present ordinance is issued in accordance with Article 27 of Decree No 28 of the Council of Ministers of 1979 on reducing outlays of liquid fuels in public and departmental transportation (DV, No 55, 1979), replacing Ordinance No 1 on the sale and accounting of petroleum products (DV, No 34, 1977).

#2. As of 1 October 1979 ministries, other departments and executive committees of okrug people's councils (Sofia Obshtina People's Council) and state and public motor vehicles will be fueled with a specially colored gasoline fuel A-83; the remaining liquid fuels shall have an adding indicator installed in the tank of the motor vehicle.

Minister of Chemical Industry: G. Pankov

For the Minister of Finance: I. V. Angelov

Chairman of the Committee for the Uniform Social Information System: D. Balevski

5003
CSO: 2200

NEW MINERAL COMPOUND--BALKANIT--DISCOVERED

Sofia OTECHESTVEN FRONT in Bulgarian 27 Jul 79 p 7

[Article by Zorka Krusteva: "Balkanit--A New Name Among Minerals"]

[Text] A new name of a previously unknown mineral--balkanit--has already been entered in the world's mineralogy manuals. It was discovered by Docent Vasil Atanasov, teacher at the Mining Geological Institute in Sofia at the Sveti Sedmochislenitsi Ore Deposit. The International Mineralogy Association has unanimously acknowledged the new mineral and its name.

Before describing this success achieved by Bulgarian science let me say a few words on the subject of minerals. They are natural chemical substances characterized by their specific composition and internal structure. So far about 2,200 mineral species are known, some since antiquity while others only recently discovered. Nature created hundreds of thousands of vegetable and animal species. In the field of chemistry, however, its possibilities have been far more limited. Even a simple chemical laboratory could synthesize a far larger number of organic or inorganic compounds.

Samples of the new mineral have already been submitted to the Natural Sciences Museum in Sofia, the USSR Academy of Sciences Mineralogy Museum in Moscow, and the museum collection of the Institute of Geology and Geophysics in Novosibirsk.

I visited Docent Atanasov in his work office at his mining geological institute. The office resembles more a museum because of the mineral samples exhibited on its shelves. Among them I saw a piece of balkanit--steel gray, smooth, shining.

As Docent Atanasov explained, balkanit is a sulfide of copper, silver and mercury. It contains chemical elements found in a large number of minerals. We are familiar with iron, manganese, copper, and silver minerals. Yet, there are very few mercury minerals, for which reason balkanit is one of the few such minerals. Furthermore, it is a so far unknown chemical compound.

[Question] How did you discover it? Did you know in advance anything about it and whether or not it could be found in our ore deposits?

[Answer] Its discovery is a combination of a number of facts, inspirations, errors, etc. Today this is ancient history, several years old. The discovery of balkanit is, above all, of scientific significance. It is true that it contains copper, silver, and mercury, which are valuable ore components. Yet, it is a rarely encountered mineral. The ores of the Sveti Sedmochislenitsi Deposit contain a far larger number of other minerals in far greater quantities, containing copper and silver.

[Question] Is it likely that balkanit and mercury-containing minerals could be found in other Bulgarian deposits? Do you have new data on the existence of mercury-containing minerals in our country?

[Answer] Possibly balkanit could be found in other Bulgarian deposits. This could be expected.... As to why I decided to study the presence of mercury in our sulfide deposits, the following paradox captivated me and gave me no rest. The territory of our country is within the so-called Mediterranean Mercury Belt characterized by a concentration of the largest number and most abundant mercury deposits in our planet. This includes Almaden in Spain, Monte Amaita in Italy, India, Avala in Yugoslavia, Nikitovka in the USSR, etc. No single mercury deposit has been discovered in Bulgaria. Until several years ago all that were found were three or four insignificant manifestations of mercury and mercury-containing minerals which failed to draw the attention of Bulgarian geologists.

[Question] What is the current situation? Has the "presence" of mercury in Bulgarian deposits been firmly determined?

[Answer] The systematic and profound study of the mineral and chemical composition of the ores in some of our deposits and of entire ore containing areas indicates that they contain a substantially higher amount of mercury. Our country belongs to the Mediterranean Mercury Belt and it is no accident that balkanit, cinnebar, and mercury-containing silver at the Sedmochislenitsi Deposit is no accident. Nor is the finding of cinnebar, silver-mercury tetravedite, and mercury-containing sphalerite at the Chiprovtsi Deposit, in Mikhaylovgrad Okrug, and the Kremikovtsi Deposit an accident.

Docent Atanasov emphasized that he studied samples of silver nuggets taken from tens of deposits, whether Bulgarian, European, American, Asian, or African. Each sample contains mercury, even though in small amounts. Silver nuggets simply concentrate mercury within them. Should pure silver be formed together with mercury minerals, the mercury content in all cases would amount to a small percentage. In the balkanit examples silver nuggets were also found 4 to 5 millimeters in diameter. However, the silver was distinct from samples of pure metal silver by its high content of mercury ranging up to 30 percent.

The first bit of pure silver was discovered in Bulgaria in 1928 in the Teteven Mountain, in the vicinity of Lesidren Village, Lovech Okrug. Actually, three samples were found there, one of which is in the mineralogy museum of Sofia University. The events related to the Lesidren silver were quite dramatic at the time. Lots for silver deposits were staked out.

It is an interesting fact that the Lesidren silver contains up to 20 percent mercury. This indicates ore mineralization similar to that of Sedmochislenitsi.

As to the Kremikovtsi Deposit, three mercury-containing minerals have been established: mercury silver, [parashakhnerite] and cinnebar. The Kremikovtsi pure silver is characterized by its exceptionally high mercury content reaching up to 52.3 percent. It has been confirmed that silver could absorb mercury up to about 55 percent. Therefore, for the time being, Kremikovtsi is the only deposit in the world with such a high, almost maximum, mercury content.

[Question] What does this mean?

[Answer] This means that the silver nuggets found in some of the mines were formed under the conditions of a very stable and active source of mercury which thus became a typical component of many of our sulfide polymetallic deposits.

[Question] Could we expect the discovery of industrial mercury deposits in our country?

"Personally, this would not astound me," Docent Atanasov said. "Furthermore, I could forecast some developments in this respect. However, the study and prospecting for mercury requires a great deal of effort on the part of organized collectives of geologists."

[Question] Could it be that many as yet undiscovered mineral resources exist in the country?

[Answer] Bulgaria has a number of minerals whose composition is exceptionally valuable. This is unquestionable. The ores in our deposits are characterized by a large number of rare and dispersed elements such as bismuth, silver, selenium, tellurium, gold, and others which, however, have been insufficiently studied as yet.

5003
CSO: 2200

AGING, OBSOLETE BOILERS POSE FURTHER ENERGY PROBLEMS

Prague HOSPODARSKE NOVINY in Czech 13 Jul 79 p 7

[Article by Engr Jiri Kures, technical deputy, CSR State Energy Inspectorate: "How To Proceed in Boiler Economy"]

[Text] The redesigning, renovating and modernizing of our boiler resources can contribute substantially to increasing the level of fuel economy and the needed reliability of boiler operations. There are, however, serious problems connected with carrying out this program prepared on the basis of CSSR Government resolution No 38/79, problems of a long-term character which so far we have not succeeded in solving in spite of extra efforts of a number of organizations including the State Energy Inspectorate of the CSR and that of the SSR and even the boiler manufacturers themselves. Even the objective causes have not been eliminated to the extent required. Experience shows that very much depends not only on the boiler manufacturers and the producers of their accessories but also on the procedures of management and planning bodies. Without these adequate efforts will not be expended to obtain the results desired.

A survey of the status of boilers which are in operation in the CSSR, their consumption of fuel (including kind and variety) and the efficiency of their use is contained in an inventory detailing technical technical data which was prepared by the State Energy Inspectorate of the CSR and the State Energy Inspectorate of the SSR for the years 1971 to 1975. Under discussion are boilers with pressure over 0.05 MPa of which there were 9,760 installed in the CSSR as of 31 December 1975. Of these, 8,806 were in operation with an annual fuel consumption of roughly 37 million tmp [ton of standard fuel] (that is 38.8 percent of the total amount of primary energy sources entering the national economy) which was used with an average efficiency of 77.4 percent. Of this amount 32.5 million tmp were solid fuels (including 13 percent graded brown and bituminous coal), 2.85 million tmp liquid and 1.62 million tmp gaseous fuels. The resulting energy efficiency of 77.4 percent must be viewed from the standpoint that this includes high performance boilers in electric power stations and thermal power stations

with an efficiency of over 85 percent and they make up over 25 percent of installed capacity.

Very Old Boilers Equate to Very High Fuel Consumption

The age of our boiler resources is also of small comfort. As of 31 December 1975, 27.9 percent of the installed boilers in the CSSR were over 30 years old or 5 years beyond their service life expectancy and another 20.1 percent of the boilers are 15 to 30 years old.

Number of Boilers Manufactured (in %)

	before 1920	from 1920 to 1944	from 1945 to 1960	from 1960 to 1975
CSR	13.4	18.2	21.3	47.1
SSR	6.4	8.3	15.5	69.8
CSSR	11.7	16.2	20.1	52.0

The age of the boilers is one of the basic reasons for excessive fuel consumption. Another reason is that the boilers are inadequately fitted with measuring and regulating equipment and there is poor operating supervision. In the CSR alone only 52.4 percent of installed boilers are fitted with instruments for measuring the heat generated, the amount of fuel consumed is measured in only 34 percent of installed boilers, underpressure in the combustion chamber, one of the important indicators of proper combustion, is measured in only 33 percent of the boilers, the temperature of flue gases emitted by the boilers only in 45.2 percent of boilers and analysis of the composition of flue gases is made in only 10 percent of the boilers. The situation regarding treatment of feed water is also unsatisfactory--around 35 percent of the boilers are operating with unsatisfactory quality of feed water which has a negative effect not only on the efficiency of heat production but also on operational reliability of the boilers (danger of trouble and breakdowns). More than half of the boilers are not equipped with flue dust collectors, about 60 percent do not have water heaters and nearly 75 percent lack air preheaters.

The status of boiler resources in Slovakia is similar. This is shown, for instance, by the results of a survey of the status and operation of 118 boilers installed in the Pozemni Stavby VHJ [economic production unit]. As ascertained by the SSR State Energy Inspectorate, 11.3 percent of these boilers had an efficiency of less than 50 percent, 10.4 percent of the boilers and 50 to 60 percent and 22.6 percent had 60 to 70 percent efficiency. Thus only 55.7 percent of the listed 118 boilers had altogether satisfactory efficiency of over 70 percent.

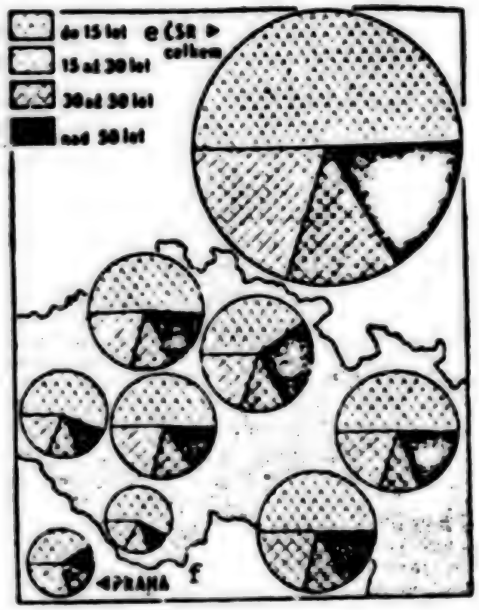
First Attempts at Improvement

The redesigning, renovating and modernizing of our boiler resources had already been considered over 15 years ago. (For the sake of completeness we must state that the concept of redesigning, renovating and modernizing includes not only tearing down the old boiler and replacing it with a new one but also equipping the boilers under construction with auxiliary areas—water heaters, air preheaters, flue dust collectors, instruments for measuring and regulating, extra equipment to allow the firing of substitute or lower grade fuels, etc.) A program was even prepared on a very high level and was to be carried out by CKD Dukla Prague national enterprise. An engineering enterprise was to be set up which was to carry out the program in its full scope. This involved preparing the course of action, industrial designing, providing for production, construction and finally operation of the boilers and training the operators. However, for a variety of reasons (including objective) these plans, undeniably proper and very important to the economy, were never carried out.

Distribution of Number of Boilers in the CSR by Age

(The area in the circle represents the number of boilers)

Key:
a. up to 15 years
b. 15 to 30 years
c. 30 to 50 years
d. over 50 years
e. CSR total
f. Prague



In an effort to improve the very unsatisfactory state of our boiler resources another program of redesigning, renovating and modernizing was prepared and this plan was also submitted by the state program for rationalization of fuel and energy consumption. All of these efforts and plans, however, had little effect. There were certain improvements but only to the extent that mostly in the period between 1966 and 1972 coal-burning boilers were redesigned to use refined fuels and new boilers generally were provided with a fuel basis also for refined fuels, permitting combustion with high energy efficiency.

Boilers Produced Do Not Meet Needs

At the present time another program of redesigning, renovating and modernizing of our boiler resources is under way and its realization should bring about significant savings in energy. This is a very complicated task, particularly because the conditions for fuel bases are deteriorating substantially, not only for new boilers but also for those under construction. The same applies also to boilers which will be redesigned, renovated and modernized. The fact is that only quite rarely can one expect to use refined types of fuels for firing in boilers, whether these be heating oil or gas. As far as graded coal goes, it is unequivocal that priority will be given to the needs of the populace. There is also the unfavorable effect of the deteriorating quality of coal which is and will also in the future be the critical basis for firing in boilers. In sum, it may be said that for newly installed boilers in industry and construction which will be subject to redesigning, renovating and modernizing the critical fuel basis coming into consideration is brown coal with a size distribution of 0 - 40 mm (0 - 30 mm) and a calorific value under 2,800 kcal/kg, but more like it will approximate 2,500 kcal/kg, with an ash and dry residue content of over 25 percent.

These fuel bases, however, do not conform to currently manufactured boilers with a capacity of up to 50 t/h (35 MW). For these capacities the following are available:

--Housing boilers with a conveyer grate which, however, require graded coal. A new model of this manufacture (Vihorlat Snina) is currently undergoing tests. A new design by Slatina Brno national enterprise (model S 2,500 U, capacity 4 t/h) showed improved efficiency of over 5 percent and was capable of burning pulverized coal with a calorific value under 3,000 kcal/kg compared with previous models. The production capacity, however, is inadequate, as some of it has to be devoted to boilers for refined fuel, replacing obsolete boilers;

--Coal-fired boilers over 4 t/h are fitted with counter-rotating conveyer grates and overthrow rotors but will not be able to handle coal of prospective quality (under 2,800 kcal/kg). The manufacturer, Dukla Prague, Tatra Kolin plant, does not yet have a sound design. Pulverized fuel-fired boilers which are expected to reduce capacity limits above 35 t/h (possibly 25 t/h) do not meet the operational requirements for partial performance. The manufacturers had hoped to use fluid firing (Duklafluid system) but this is not fully solved with respect to operational reliability, controlability and fuel handling. There is also a question of cooperation with the GDR (special traveling grates). The production of vertical axle grates developed in the CSR 25 years ago and proven in the Komorany electric power station for use with ash-content pulverized coal was rejected by CKD Dukla Prague.

Capacity of Manufacturers Inadequate

An even more complicated problem, however, is the capacity of manufacturers of these boilers--CKD Dukla Prague national enterprise, Slatina Brno national enterprise and Vihorlat Snina national enterprise.

Under present conditions they are providing delivery of boilers for new construction only with great difficulty; they are having serious problems carrying out the renovation of boiler resources due to over-age, breakdowns of boilers or urgent needs of special purpose production. Added to this is the underestimation of the importance of boiler production which leads (as for example in Slatina national enterprise) to the fact that the production program of boilers and also the requisite technological development are being "side-tracked." The delivery of boilers is not meeting required deadlines, production cannot be assured because of material shortages and even necessary cooperation is lacking between boiler producers and producers of accessories (ventilators, feed water regulators, armature, measuring and regulating equipment, coal handling, etc). A typical case is that of failure to supply boiler plate for CKD Dukla national enterprise which for this reason is considering limiting or discontinuing the production of the Buderus model boilers manufactured under license. Furthermore, this enterprise does not have sufficient production capacity and space.

To Insure Prescribed Goals

Under these conditions we cannot expect that the process of redesigning, renovating and modernizing our boiler resources will be realized to the necessary extent and in time and will bring about the needed fuel economies. Therefore, so the prepared program will not remain simply wishful thinking, as with the previous programs, it is absolutely necessary to:

--Integrate the program of redesigning, renovating and modernizing into the plane and thus insure it in all its complexity. In this connection establish priorities and set up a working schedule for fulfillment of this program;

--Create an engineering organization (plant) for the comprehensive execution of the redesigning, renovation and modernization, that is, carry out a survey of the present status, designing preparations, production and cooperation of boiler manufacturers with producers of accessories, construction and installation work and starting up operations;

--Arrange for a servicing operation for the boiler economy, the production and delivery of spare parts and the provision of specialized maintenance work by a delivery method;

--Provide for the development of centralized supplying of heat to a much greater extent and the consolidation of heat sources;

--Rapidly complete the development of new combustion equipment permitting the firing of fuels which are now already earmarked for use in boilers in industry and construction or in plants of the food industry and agriculture. This involves especially fluid combustion and the use of traveling of reversible grates which are suited for burning low-calorie fuels 0 - 30 mm in size, as used, for instance, in the GDR;

--Intensify work on making use of combustible urban and industrial wastes for the generation of heat and make use of lumber waste and secondary energy sources.

Insofar as these conditions are not met the newly prepared program of redesigning, renovating and modernizing our boiler resources will remain only on paper or at best will be carried out to a negligible extent and over an extended period of time. We must proceed to achieve the greatest fuel economies in the shortest possible time, especially with respect to refined and graded types of fuel.

8491
CSO: 2400

CROP, WEATHER REPORT PUBLISHED FOR JUNE 1979

East Berlin FELDWIRTSCHAFT in German Vol 20 No 8, Aug 79 p 394

[Report by Dr D. Krumbiegel, GDR Meteorological Service, Central Weather Bureau, Potsdam]

[Text] The Weather in June 1979

With the exception of two brief periods that were too warm, at the beginning of the month and at the beginning of the last 10-day period, daytime average air temperatures hardly deviated from the norm. The first half of the month brough much rain, but only regionally or locally was it abundant. During the third 10-day period only the southern bezirks got larger volumes of rain.

The first 5-day period had average daytime air temperatures that were from 6 to 10K too high. Then, up to the end of the second 10-day period, the weather was mostly too cool. And then there were a few days when the values were from 4 to 6K above normal. In the second half of the month, the northern GDR was often at a disadvantage in terms of temperatures, compared with the southern. At the beginning of the month, daytime maximum temperatures lay around 30°C (locally up to 34°C). Subsequently, maxima between 20 and 25°C were reached widespread only at the beginning of the second 10-day period and between 20 and 27 June. Nocturnal ground temperature minima lay between 5 and 10°C around 10 June and from 15 to 20 June, and for the rest of the time usually between 10 and 15°C. Duration of sunshine was in line with the longtime average, yet the second 10-day period clearly got less sunshine than the other two.

Up to midmonth, local showers brought daily rain volumes between 15 and 30 mm, in some places even between 50 and 85 mm. Around 15 June, the bezirks of Potsdam, Frankfurt (Oder), Cottbus, Dresden and Karl-Marx-Stadt got rain volumes of between 30 and 50 mm.

Temperature Data for June 1979 according to the Chief Climatological Office, Potsdam

1. Daily Mean Air Temperatures and Deviations from the Norm:

Schwerin	16.3°C	+0.7K	Erfurt	16.7°C	+1.5K
Neubrandenburg	16.5°C	+1.5K	Leipzig	17.8°C	+2.0K
Potsdam	18.5°C	+2.2K	Goerlitz	18.2°C	+2.6K

2. Mean Precipitation according to Bezirks

Rostock	37 mm = 71%	Halle	56 mm = 102%
Schwerin	39 mm = 71%	Erfurt	64 mm = 103%
Neubrandenburg	43 mm = 81%	Gera	65 mm = 94%
Potsdam	63 mm = 117%	Suhl	63 mm = 89%
Frankfurt(Oder)	67 mm = 122%	Dresden	71 mm = 90%
Cottbus	68 mm = 111%	Leipzig	57 mm = 90%
Magdeburg	57 mm = 110%	Karl-Marx-Stadt	90 mm = 103%

3. Evaporation Potential

Northern Bezirks	85 to 95 mm
Central Bezirks	95 to 105 mm
Southern Bezirks	75 to 95 mm

Soil and Crop

Surface soil temperatures on 7 June dropped back down below the 20°C limit. When it warmed up again in the third 10-day period, ground temperatures rose again up to around 20°C. Similar temperature changes occurred in the subsoil. By the end of the month, values at a 50-cm depth lay between 18 and 22°C, at a 100-cm depth, between 15 and 19°C. These temperatures were more or less in line with longtime averages. As the rain came down mainly in the form of showers, considerable runoff losses have likely occurred. The ground water content consequently went down widespread. Only the persistent rain around midmonth provided some bezirks temporarily with a strong ground water boost. Except for a few smaller areas, a strong reduction in ground water, of from 20 to 30 mm (locally, to as much as 40 mm), ensued in the third 10-day period. The last ground water check, of 30 June, below the turf, showed mostly from 10 to 40 percent of usable water capacity for the stratum down to a 50-cm depth. Among the cultivated plants in the process of growth low values had to be assumed. Soil climatic conditions for friability and nutrient mobilization were increasingly held back in wide areas by the ground water shortage. This was true above all for the northern bezirks and soils low in water storage capacity. In terms of soil temperatures, there were relatively favorable conditions for soil-biological processes. Abundant and intensive rains in the first half of the month produced erosion damage, silting and subsequent encrustation.

The air temperatures in the first 5-day period, far above normal, lay above the assimilation optimum. Thereafter, up to the beginning of the last 10-day period, growth conditions were relatively favorable. That was true mainly for the bezirks that got more rain and for soils with a high water storage capacity. In the other areas, subnormal air temperatures and the small amount of sunshine eased the burdens of the soil and crop water budget. In the course of the last 10-day period, growth conditions were under increasing restraint because of the, mostly, meager amounts of natural moisture. Corn came up extremely rapidly. Most conspicuous was that the winter rye

generally did not grow very tall. That may have been because it started sprouting late, came up in dense lots and had unfavorable nitrification conditions. The winter grain, especially the winter barley, was extremely high in weeds with apera as the result of the wet 1978 autumn. Root crops showed a fine early growth. This, in combination with the strong pressure from all the weeds, required a high workload concentration on maintenance activities. In field forage grasses and pastures, a rapid transition was made from the vegetative to the generative phase. Optimum utilization spans were therefore exceeded in part. That was largely also conditioned by the unfavorable drying conditions in the time between 5 and 16 June. During the first half of the month, the weather encouraged fungus formation, thereafter, more and more animal pests. Being previously held back, phenological development by the start of the month became normal unsually rapidly. By the end of the month, it even showed a trend of becoming premature.

Field work up to midmonth encountered interference, temporarily and locally, due to the rains. Thereafter, hardly any other interruptions due to the weather occurred. The winter catch crop harvest and the recultivation were completed, for all intents and purposes, in the first 10-day period. But the root bed allocations and the first meadow cut took all month. There were high irrigation requirements which, above all in the first half of the month, and in the southern bezirks also in the last 10-day period, were mitigated temporarily.

Meteorological Projections for Farming for August 1979

For grain, mainly in the northern bezirks and on soils with a low water storage capacity, one must expect a compression of the maturation spans that are typical of the varieties and kinds. Varieties allowing for only brief threshing periods should therefore get priority harvesting attention in order for preharvesting losses to be avoided. Special attention in harvesting-threshing should be given to permanently checking and keeping clean the cleaning elements, since there is such an excess of weeds. That fact also calls for immediate stubble working. As silo corn crops have been cultivated late in many cases, in comparison with average years, there is a chance it will not ripen in the silos. We therefore recommend an appropriate assessment that takes into account local early frost risks. Extensive opportunities for irrigating legumes, root crop and forage ought to be used.

5885
CSO: 2300

ACHIEVEMENTS, TASKS OF CHEMICAL INDUSTRY HIGHLIGHTED

Budapest MAGYAR NEMZET in Hungarian 19 Jul 79 p 3

[Article by Istvan Vig: "Our Chemical Industry"]

[Text] Recently, the 1978 data pertaining to heavy industry products, the export-import trade of factories under the supervision of NIM [Ministry of Heavy Industry], as well as the branch's export profitability were discussed in the Heavy Industry Ministry.

In Hungary, one of the outstanding branches of heavy industry is the chemical industry which, for years, has been the most dynamically growing part of our people's economy. Its production contributes to our ruble and non-ruble accounting exports, and it has an important role in domestic supply. Through the preparation of chemical fertilizers, it increases domestic agricultural yields. In this connection we quote D. H. Richard Barton, Nobel prize winning chemist, who said that according to rough estimates the hydrogen and nitrogen conversions which to a large extent are performed by the chemical industry, increase the amount of food resources five fold.

The large agricultural enterprises are utilizing the various domestic plant protection agents against pests in increasing amounts. A more complete picture of the chemical industry requires our mentioning supplying the population. An important portion of our chemical industry is composed by the internationally famous Hungarian pharmaceutical industry, which has a prominent role in the population's health maintenance and disease treatment. There are almost no households today wherein a large variety of detergents and synthetic products cannot be found.

Growth

The chemical industry grew rapidly last year and in the first half of this year. This was obvious in the latest communique from the Central Committee of the Hungarian Socialist Workers Party. At the June meeting, it was determined that industrial production in the period concluded increased by nearly 4 percent, approaching the planned level. In comparison, chemical industry growth was greater. We shall immediately add that the growth coincided with people's economy requirements and with improvements in efficiency. Calculated

at comparable prices, the production increase amounted to 7.3 percent in the first half year. Within the chemical industry, pharmaceutical enterprises produced 6 percent more, while the production of organic and inorganic chemistry factories grew by 15.2 percent. The new plants of both the Borsod and Tisza Chemical Complexes were significant. Hence the PVC plant at Kazincbarcika and the polypropylene factory at Leninvaros contributed to the production increase. Incidentally, both large chemical enterprises earned the Outstanding Enterprise distinction on the basis of last year's work. Both new plants were completed before the deadline and within the earlier determined costs, which, unfortunately, is rare. The planned amounts and the prescribed quality of products are issuing from the new plants. This contributes to the growth of profitable exports.

An unchanging problem for our people's economy is the increase of our non-socialist imports.

How much did chemical industry enterprises do to reduce our non-ruble accounting imports? Our factories are increasing the manufacture of synthetic packaging materials and sacks, and are endeavoring to satisfy the most recent foil requirements of light industry. They are manufacturing especially thin varieties in order to reduce our non-socialist import of these. The acquisition of chemical industry raw materials is of fundamental importance for our reprocessing. Of these raw materials purchased from non-socialist markets, 40 percent are allotted to heavy industry enterprises. The larger portion is purchased on Western markets by the enterprises of other ministries. Thriftiness with imported materials originating from non-socialist countries is an exceptionally important task. For this reason, the Heavy Industry Ministry instituted the body which can give professional advice to enterprises. This committee, composed of researchers and experienced engineers, can recommend products from domestic and other socialist sources to replace those from imports. It also makes recommendations towards the alteration and modernization of manufacturing technology.

Efficiency

Nowadays the satisfaction of quality requirements, such as the increase in profitability, thrift in materials and energy and the increase in production through productivity are of essential importance from the viewpoint of social progress. At the heavy enterprises this is not only discussed but is acted upon. For example, productivity in the chemical industry, for the first 6 months, compared to the same period last year, increased by 7.7 percent. Improvement in management is discernible at several enterprises. At the Ajka Aluminum Oxide Factory and Aluminum Foundry, the cost of aluminum oxide preparation was reduced by 2 percent in a 3 month period. At the Inota Aluminum Foundry, the manufacture of more worthwhile products was begun. At the Borsod Chemical Complex, antiquated equipment is being systematically shut down in order to be able to more economically utilize more modern machinery. Here also, they are utilizing 200 kilowatt hours less electrical energy per ton to prepare one of their products. They are handling raw materials in a more economical manner, expecting as a result to save several million forints by the end of the year.

The worker population is decreasing at some chemical industry enterprises, but the work force they are missing is being replaced through better organization. At the Hungarian Synthetic Material Processing Enterprise, at the National Petroleum and Natural Gas Trust and at the Hungarian Aluminum Trust, measures have been worked out through which monetary incentives motivate more efficient work.

This year began with difficulties in Western market sales for Hungarian chemical industry enterprises. The second quarter was more encouraging, while the current one is vigorous. The 3 foreign trade enterprises which market chemical industry products, Medimpex, Chemolimpex and Mineralimpex are working together with the chemical industry enterprises to achieve profitable exports. The chemical industry enterprises are planning on sales of 350 million in ruble accounting exports. The plan for non-ruble accounting exports is 400 million dollars.

Responsibility

At the October 1977 meeting of the Central Committee of the Hungarian Socialist Workers Party, during the discussion of the directive principles of the modernization of the production structure, Karoly Nemeth, member of the Political Committee and secretary of the Central Committee, referring to world market changes and to the tasks of improving our country's foreign economic balance, among other things, emphasized: "The technical and economic factors must be more closely connected in our economic work. Technical progress must be accelerated in such a way that the expected internal and external market conditions are taken into stricter account, and thus better serve to improve economic efficiency. In case of disagreements or conflicts of interest, the primacy of total social interests must be consistently implemented. We must make the effort to have the union of enterprise and individual interests aid in the implementation of the tasks placed upon the enterprises, and aid self sufficient thinking and responsible action." Many observations indicate that the chemical industry is moving along this road.

Our society recognizes the great intellectual capacities accumulated in our chemical industry, has a high opinion of state and Kossuth award winning researchers and economic leaders, and respects the very knowledgable, skilled workers, engineers and technicians. Their work and their efforts will reap better results if the higher decision authorities and monetary measures make more rapid decisions on recommendations. This requirement was again voiced at the last parliament discussion and at its preceding committee meeting.

9093
CSO: 2500

POSSIBILITY FOR STRUCTURAL CHANGE IN AGRICULTURE LIMITED

Budapest FIGYELO in Hungarian 18 Jul 79 p 11

[Article by Dr Laszlo Nemeti: "Structural Change and Growth"]

[Text] The level and composition of the forces of production are important factors of structural transformation in agriculture. We can count in the period ahead on a further transformation of the agricultural forces of production. It may be at a slower rate but the agricultural work force and the area of land serving agricultural production will continue to decrease. At the same time we cannot count on a significant expansion of investments serving to replace and expand the production capacity being lost. The relatively modest fixed assets development prescription of the Fifth Five-Year Plan already indicates this. Between 1970 and 1975 the fixed assets of agriculture increased by an annual 8.5 percent--including an increase of 12.3 percent in the agricultural cooperatives. The rate of growth slowed after 1975 and fixed assets now increase by an annual 5.7 and 8 percent respectively. Thus investment possibilities circumscribe the rate of development in agriculture and largely determine the direction of development also.

Differing Assets Needs

A significant proportion of the fixed assets being used in agriculture is tied to definite branches. Many branches in crop production use special, so-called single purpose machines. The situation is relatively more favorable in grain production because the very expensive machines can be used, with minor adjustments, for cereal grains, for corn or even for vegetable oil crops. But some of the very expensive machines can be used only in a given branch, for example in the production of sugar beets, potatoes or garden crops.

In animal husbandry improving the conditions for maintaining the animals and providing a continuous supply of feed as needed demand modernly equipped and outfitted buildings. Buildings for animals, animal raising sites and agricultural storage buildings (feed silos, fodder storage buildings, storage for potatoes, vegetables and fruit, greenhouses, etc.) are all very valuable fixed assets. Using these in accordance with their function will decide the possibilities for economical structural transformation for a number of years. The production structure of large specialized operations can be changed only with increasing difficulty--at the price of great sacrifices by the farm or the people's economy.

In the course of development we must also reckon with the fact that the asset needs of the several branches differ greatly. For example, in the production of wheat, corn, sunflowers or green peas one can realize a production value of near to or more than 100 forints for every 100 forints of assets. This ratio is substantially less favorable in the grape and fruit branches. Of the animal husbandry branches the asset needs indexes are best for hogs, roasting chickens and egg production and are most unfavorable for beef raising.

Other factors, in addition to the above, also limit a swift change in the production structure. For example, agrotechnical and crop rotation requirements, the internal vertical structure of the farms (producing, mixing and using their own fodder), maintaining a number of branches to reduce risk, etc.

An important condition for and limitation on the development of the production structure is the fact that small scale production accounts for about 34 percent of agricultural production. These farms produce 40 percent of the vegetables, 48 percent of the fruit, 46 percent of the grapes, 52 percent of the hogs, and about 67 percent of the eggs. The small farms cannot do without the support of the large farms. This is indicated by the fact that in the 1970's the commodity links between the cooperatives and the household plots expanded to a large degree. Traditional household plot farming declined and the character of the household plot was radically transformed. To an increasing extent the large farms integrate household plot farming--making them an organic part of production and marketing. The division of labor which is developing has a definitive effect on the production structure.

Slow Specialization

Many-sidedness continues to characterize our agricultural production. Only 11 percent of the farms specialize entirely on crop production and only 9 percent specialize on animal husbandry. The mixed character of production is only partly a result of earlier production relationships. Our natural conditions are suitable for the effective production of many types of crops.

It follows from what has been said that there is a possibility for only a gradual and minor modification of the production structure of Hungarian agriculture. The shrinking land area and the limits on live work and investment assets make possible the development only of branches with favorable biological, technical and economic conditions.

Because of the area limitations the method of development can only be to increase yields. And increasing yields requires that we satisfy the natural and technical needs of the branches at a high level.

In harmony with the interests of the people's economy we must harmonize a strategy aimed at improving the economicalness of export with the short range interests attaching to the volume of foreign exchange receipts.

Our natural conditions and the production culture which we have developed justify and make possible primarily a further increase in yields in grain production. Neither the natural conditions nor the economic conditions justify any significant modification of the sowing structure. Only minor changes, involving about 100,000 hectares, are possible in the sowing structure of crop production. This means, primarily, that we should concentrate corn production in areas with more favorable soil and climate conditions (the corn-wheat ratio here can be 40-60 or 50-50 percent) while we should produce barley instead of corn in areas with less favorable soil and climate conditions, in northern Hungary and in western Trans-Danubia.

The production of sunflowers, which have favorable production conditions and export possibilities, might be increased further within the sowing structure, as might be rape production in some areas.

The production of sugar beets and potatoes must be limited to the satisfaction of domestic needs. The sowing area for fiber crops should be reduced also. We might consider satisfying our needs on the basis of long term contracts with neighboring countries, partly through the import of finished goods, that is, textiles.

Of the gardening cultures we should ensure all the domestic needs for fresh vegetables. Of the canning vegetables we should specialize on a few products (green peas, green beans, tomatoes and peppers).

Apples will continue to play a defining role in fruit production. In addition it might be economical to develop those berries which are used primarily in the quick freeze industry. But the conditions for this can be created only by integration of the small producers, making them interested. (Common planting, cultivation and crop protection, etc.)

To a certain extent there are investment limits (in our historical wine regions but to a larger extent there are live work limits on the expansion of vineyards.

The structure of crop production (a significant increase in feed production) and export interests influence the development of animal husbandry. Today the economicalness of the export of grain is more favorable but foreign exchange receipts more than twice those for the export of raw products could be achieved with the export of meat. (Net foreign exchange yields of 16,850 forints can be achieved from one hectare of wheat; 35,190 forints in the case of slaughter hogs and 43,800 forints in the case of roasting chickens.) In accordance with this the animal husbandry branch can count on a swifter development of branches consuming feed. This is justified by the biological base at our disposal, but the high productivity of live work which can be achieved in these branches, by the favorable assets needs, by the favorable economicalness of export at various processing levels and by the marketing possibilities (especially the grain-meat-energy exchange after 1980). Favorable marketing and economical export also justify an increase in the production of sheep and small animals--rabbits, pigeons, etc.

The Role of the Economic Regulators

Large scale production must be increased despite the investment limitations. Over the long range the keeping of cows will decrease on the small farms, partly because of urbanization and partly because of feeding difficulties.

Branches based on modern technology must be concentrated on the large farms while the production of cultures requiring hand work--fresh vegetables and berries are most important for supplying the populace--must be based more than heretofore on commodity production by small farms. In the case of feed consumers and small animals, exploiting the cooperation of large and small farms, the large farms producing the feed and the small farms raising and fattening the animals, we might increase the production of port and, if necessary, poultry, rabbits and pigeons.

The economic regulators' orienting effect has an important role in changing the structure of agriculture--within the geographic and biological limits. The present price and profitability ratios not only tangibly hold back the development of the production structure in the planned direction but sometimes cause a regional restructuring which is unfavorable. A suitable interest system must be created. If the material incentives reflect the market requirements adequately and in time then production can follow these changes better too.

Planned regulation must be further developed in such a way as to be in harmony with the plans which pertain to structural improvement.

Namely:

--incentive prices must encourage the production of products which can be sold economically on foreign markets (wheat, corn, sunflowers, hay flour, fresh and fast frozen vegetables and fruits, berries, stone-fruits, quality wines, slaughter sheep, fish, slaughter rabbits and pigeons, goose liver, game and sometimes slaughter hogs and port products);

--with the coming to the fore of quality requirements a differentiation according to quality must be increased in producers prices and in export interest;

--special attention must be turned to the production of meat flour which moderates the import of protein fodders and to the processing of wastes at slaughter houses;

--the increase in efficiency hiding in a rational regional distribution of agricultural production must be placed in the service of structural change too, including the production of products linked to the region, for example encouraging in a regionally differentiated way the production of grapes, fruit, tobacco, etc.; and

--agricultural production must continue to be supported in areas with unfavorable natural conditions.

The natural, biological and even technical conditions for the development of the production structure are largely circumscribed and the market conditions are not clear at this time. Considering the export oriented character of development, clarifying this is a most urgent task for a secure development of production.

8984
CSO: 2500

SIX-MONTH FULFILLMENT OF 1979 SOCIOECONOMIC PLAN REPORTED

Warsaw TRYBUNA LUDU in Polish 30 Jul 79 p 5

[Communique of the Main Statistical Office (GUS) on the Development of the National Economy and the Fulfillment of the National Socioeconomic Plan for the First 6 Months of 1979]

[Text] In the first 6 months of 1979, economic tasks were realized in difficult conditions due to an exceptionally hard winter, floods, and thaws in the period from January to April of this year, and a dry spell in May-June of this year, which affected considerable areas all over the country. Despite tapping the reserves in the first quarter of this year, a decrease in production of many fundamental raw and other materials occurred in many fields.

The situation was complicated by difficulties in the work of transport and energy. Despite the improvement in the majority of sectors, the arrears affecting the outcome of the entire first 6 months of this year were not made up in the second quarter of this year.

The development of the national economy in the first 6 months of 1979 is illustrated by the following major indices:

Item	Index for 1st half of 1979 1978=100
Products sold in socialized industry	100.6
Basic production of the socialized construction-assembly enterprises	90.3
Transport of freight by socialized transport enterprises	94.5
Transport of passengers by the socialized transport	95.7
Purchase of farm products	112.0
Retail sale of goods	106.8
Exports	110.2
Imports	103.7

Item	Index for 1st half of 1979 1978=100
Capital outlays in the socialized economy	86.1
Employment in the socialized economy (excluding apprentices)	100.1
Products sold per employee in socialized industry	100.8
Production and services per employee in the socialized construction-assembly enterprises	95.1
Wage fund	107.7
Floor space of dwellings completed for the nonagricultural population in the nationalized economy	89.0

Social Development of Poland

By the end of June 1979 the population of Poland reached 35.2 million persons and rose by 0.5 percent compared to the status at the end of 1978.

The average employment in the socialized economy in the first half of 1979 amounted to 11,930,000, slightly over the level reached in the first half of last year.

An increase in employment occurred in spheres of activity beyond material production, in such divisions of the economy as health service and social welfare (approximately 20,000), education and upbringing (approximately 10,000), housing administration (approximately 12,000). In the sphere of material production, especially in industry, building, and trade, employment slightly decreased as compared with the first half of last year.

The people's cash incomes from units of the socialized economy embracing remuneration for work, social benefits, revenue from sales of farm products and others were 9.6 percent higher in the first half of 1979 than in the first half of 1978.

The wage fund in the socialized economy amounted to 404.4 billion zlotys and was higher by 27.8 billion zlotys, i.e., 7.7 percent, compared to the first half of last year, despite a low advancement in the implementation of the material production plan. There was a particularly high rate of growth of payments out of the plant awards fund which increased in that period from 27.8 billion zlotys to 30.6 billion zlotys, i.e., by 10.3 percent.

The personal wage fund increased by 7.9 percent compared with the first half of last year, and reached the level of 356.6 billion zlotys. The growth of the personal wage fund was due to increased wages of teachers and health service workers introduced at the end of last year, and this

year's increases in the earnings of those employed by the Polish State Railways (PKP), the chemical and printing industries, administration of justice, and employees of financial institutions. Moreover, the lowest wages were raised from 1,600 zlotys to 1,800 zlotys in May 1979.

The average monthly nominal wage in the socialized economy per worker in the first half of 1979 was 4,883 zlotys, 351 zlotys or 7.7 percent more than in the first half of 1978.

The payments of old age and retirement pensions (excluding benefits to private farmers) amounted in the first half of 1979 to 60.3 billion zlotys, 8.9 billion zlotys, or 17.2 percent more than in the first half of last year. The average old age and retirement pension reached the level of 2,481 zlotys--11.2 percent more than in the same period of last year.

The increase was due to another statutory increase of about 2.7 million pensions out of a total of 3.8 million, and to the steadily rising level of newly granted old age and retirement pensions. By 1 January 1979 the level of minimum pensions had increased from 1,450 to 1,625 zlotys.

The number of old age and retirement pensions for private farmers increased by 79,000, or 44.2 percent, in the first half of 1979 as compared with the first half of 1978, while the average pension rose by 33.8 percent, reaching the level of 1,700 zlotys.

Savings deposits in general and cooperative banks amounted to 436.1 billion zlotys by the end of June 1979, and rose by 11.8 percent compared to the status at the end of June 1978.

In socialized housing construction for the nonagricultural population, dwellings totaling 3,780,700 square meters were handed over for use, i.e., 11 percent less than during the same period of last year. This constitutes fulfillment of the annual tasks as specified in the National Socioeconomic Plan by 31.1 percent.

The current expenditures from the state budget for social and cultural services (i.e., education and upbringing, culture and art, health protection and social welfare, physical culture and sports, and also tourism and recreation, amounted to 85.9 billion zlotys in the first half of 1979 and were 11.4 percent more than in the corresponding period of last year.

The number of those who finished general education secondary schools by the end of the 1978/79 school year was about 125,000, and vocational schools of all types, about 579,000.

As compared with last year, the number of those who had completed general education schools was 8.9 percent lower than last year, and vocational schools, 0.8 percent less.

Further progress was made in the development of the various forms of child care. In 1979 about 2.5 million children and youth benefited from organized winter holidays; of those 378,300 away from their place of residence.

The number of graduates from higher schools in the first half of the current year was 51,300. In addition 4,100 completed supplementary master's studies.

In the first half of 1979, the number of beds in general hospitals increased by 700 and at the end of June totaled 197,500.

The number of places in permanent day nurseries by the end of June was 97,300, i.e., it increased by 2,000 compared to the status at the end of December 1978.

Internal Trade and Services for the Population

Retail sales of consumer and nonconsumer goods by socialized economy units in the first half of 1979 totaled 567.7 billion zlotys and was 6.8 percent higher than the sales in the same period of last year, in terms of current prices.

The value of retail sales of foods (at current prices) increased, in the periods compared, by 8.8 percent and of nonfood commodities by 5 percent.

The value of Polish-made and imported goods (at current prices) supplied to the market in the first half of 1979 amounted to 642.4 billion zlotys and rose by 4.2 percent compared to the first half of last year.

Deliveries of certain commodities for supplying the market in the first half of 1979 were as follows:

Commodities	Unit of measure	First half of 1979	
		Fulfillment	Index for 1st half 1978=100
Meat, poultry, offal, processed foods	Thousand tons	976.6	105.9
Fish and fish products	Thousand tons	113.2	108.2
Edible fats	Thousand tons	273.8	104.5
Butter	Thousand tons	114.3	105.7
Vegetable fats	Thousand tons	87.2	103.2
Animal fats	Thousand tons	72.3	104.3
Consumer milk	Million liters	1,190.2	108.1
Cheese and cottage cheese	Thousand tons	124.6	102.0
Eggs	Million	1,021.7	111.9
Sugar	Thousand tons	497.2	100.7

Commodities	Unit of measure	First half of 1979 Fulfillment	First half of 1979 Index for 1st half 1978=100
Vodka, clear and flavored, in terms of 100 percent	Million liters	83.1	83.4
Textiles: Cotton and cotton-like	Million meters	133.2	87.7
Wool and wool-like	Million meters	30.3	100.0
Silk and silk-like	Million meters	42.3	90.0
Ready-made clothes: Knitwear	Billion zlotys	18.8	95.9
From textiles	Billion zlotys	28.6	91.7
Footwear: leather and from artificial synthetic products	Million pairs	33.3	100.4
Furniture	Billion zlotys	17.5	93.6
Household refrigerators	Thousand units	473.5	106.3
Household electric washing machines and spin dryers	Thousand units	406.3	94.7
Including automatic washing machines	Thousand units	158.7	113.5
Sewing machines	Thousand units	122.0	140.2
Kitchen ware: enamelled	Thousand units	23,380	102.7
Aluminum	Thousand units	6,287	130.8
Gas stoves with ovens	Thousand units	162.6	102.1
Kitchen robots [multi-function food processors]	Thousand units	276.2	120.4
Table china	Million zlotys	1,306	137.9
Table glassware	Million zlotys	1,889	122.5
Radio sets	Thousand units	1,074	100.5
TV sets	Thousand units	487.4	85.6
Including color TV sets	Thousand units	71.5	94.8
Tape recorders	Thousand units	351.5	110.4
Including stereophonic	Thousand units	61.5	106.2
Passenger cars	Thousand units	114.2	96.7
Bicycles	Thousand units	712.9	106.2

The value of services sold to the population by units of the socialized economy (at current prices) in the first half of 1979 was 82.1 billion zlotys and was 7.3 percent higher compared with the similar period in 1978.

Industry

Sold products of the socialized sector of industry (at sales prices for 1979) rose by 0.6 percent in comparison with the first half of 1978 and against a 4.9 percent increase envisaged by the National Socioeconomic Plan for 1979. Production for market supplies remained at almost the same level as during the first half of 1978, against the planned 7.7 increase per year.

The growth rate of industrial production was affected by the disturbances which occurred during the first quarter of the year and were caused by the extremely difficult weather. The backlogs which occurred in those conditions have not yet been made up.

Notwithstanding the difficulties, production increased in some industrial branches. A higher than average rise in sold products occurred in the metal, machine, power, electro-engineering and electronic, precision products, glass and whiteware industries.

The production of a number of basic products, including among other things, natural steel, rolled products, electrolytic copper, farm tractors, seagoing vessels, TV sets, plastics, synthetic rubber, cement and wall elements, furniture, paper, cotton, woolen and silk fabrics, knitwear, and butter was lower than planned. On the other hand, hard coal extraction and production of semiconductors, passenger cars, automatic washing machines, and deep-sea fishing advanced considerably.

The production of the more important items by socialized industry was as follows:

Commodities	Unit of measure	First half of 1979	
		Fulfillment	Index for 1st half 1978=100
Hard coal	Million tons	101.3	104.3
Electric power	Billion kWh	58.7	102.2
Natural steel	Million tons	9.4	100.4
Rolled products	Million tons	6.7	100.8
Electrolytic copper	Thousand tons	158.3	100.4
Ball bearings	Millions	63.6	123.3
Metal cutting machine tools	Million zlotys*	3,974	100.4
Electric rotary machines	Million zlotys*	4,845	93.5
Automatic control and monitoring equipment	Million zlotys*	5,276	112.5
Semiconductor elements	Millions	119.5	109.4
Including transistors	Millions	43.4	103.4
Computers	Million zlotys*	948.6	121.1
Agricultural machines and implements	Billion zlotys*	8.2	96.8
Passenger cars	Thousands	176.9	105.1
Trucks	Thousands	24.5	88.8
Buses	Thousands	7.5	102.7
Two-axle farm tractors	Thousands	26.3	87.8
Two-axle farm tractors	Thousand hp	1,228	86.3
Seagoing vessels	Billion zlotys*	7.2	92.5
(over 100 DWT)	Thousand DWT	195.4	97.1

Commodities	Unit of measure	First half of 1979 Pulfillment	First half of 1979 Index for 1st half 1978=100
Radio sets	Thousands	1,279	99.7
Including stereophonic	Thousands	114.4	70.1
TV sets	Thousands	429.1	83.1
Including color TV sets	Thousands	34.6	106.3
Household automatic washing machines	Thousands	151.3	115.5
Household refrigerators	Thousands	405.3	90.1
Household sewing machines	Thousands	177.8	105.7
Fertilizers in terms of pure component (NPK)	Thousand tons	1,176	88.0
Plastics	Thousand tons	211.0	90.6
Synthetic rubber	Thousand tons	61.4	103.5
Synthetic fibers	Thousand tons	75.4	98.9
Pharmaceuticals	Billion zlotys*	8.4	114.8
Cement	Million tons	9.1	82.4
Furniture	Billion zlotys*	17.0	96.3
Paper	Thousand tons	472.2	86.8
Fabrics: Cotton and cotton-like	Million meters	442.8	94.3
Wool and wool-like	Million meters	61.3	97.5
Silk and silk-like	Million meters	80.3	93.8
Footwear (excluding rubber footwear)	Million pairs	70.9	100.0
Meat from commercial slaughter	Thousand tons	1,321	105.5
Including poultry	Thousand tons	147.6	106.7
Smoked meats	Thousand tons	391.7	101.0
Saltwater fish (catches)	Thousand tons	368.2	118.6
Consumer milk	Million liters	1,327	107.3
Butter	Thousand tons	105.3	90.9

*Comparable prices

In the first half of 1979 the average number of people employed in socialized industry was 4,762,000 and it decreased by 11,500 people, i.e., 0.2 percent, in comparison with the corresponding period last year. An 0.8 percent increase in labor productivity was observed in comparison with the same period last year, as against a 5.3 percent increase envisaged by the National Socioeconomic Plan for 1979.

Agriculture

Weather conditions last winter and [illegible]g were particularly unfavorable for agriculture. The long and se[illegible]er, the delayed spring and the flood in some parts of the country caused serious losses in crops, greater than average losses for many years. As a result, some 263,000 hectares,

or nearly 6 percent of the area sown to winter grains had to be plowed under. This included 92,000 hectares sown to wheat (some 6 percent), 155,000 hectares sown to rye (some 6 percent), 16,000 hectares sown to barley (some 13 percent), and 196,000 hectares sown to winter rape (some 52 percent). The greatest losses in rapeseed crops were noted in Lublin, Elblag, Olsztyn, and Biala Podlaska voivodships, where more than 90 percent of the fields had to be plowed under, and in the Siedlce, Ciechanow, Gdansk, Suwalki, Plock, and Chelm voivodships, where more than 80 percent of the fields were plowed under.

The sowing of spring grains, the planting of potatoes and the grazing of cattle in pastures were all delayed by nearly 3 weeks.

The hot and sunny weather from the middle of May until the end of June caused soils in large areas of the country to go dry which affected the condition of crops and shortened the period of vegetation. At the end of June the condition of crop fields was worse than at the same time last year, which is expected to cause a reduction of grain and rape yields compared with the average yields in the last 3 years.

According to preliminary data of the 1979 agricultural census, the cattle population was some 0.6 percent down from June last year, including a 0.6 percent drop in the cow population. The number of pigs also decreased by some 2.3 percent overall, while the number of sows increased by 5.3 percent and the number of piglets decreased 2.1 percent. Sheep numbers were 0.7 percent down from the same period last year.

In the nonsocialized sector of agriculture the number of cattle decreased by some 1.2 percent, pigs--by some 1.8 percent, and sheep--by some 4.6 percent.

In the first half of the year the following quantities of basic animal products were purchased from farmers:

Products	Unit of measure	First half of 1979		
		Procurement	Indices: First half 1978=100	Indices: Plan=100
Total animals for slaughter in terms of meat	Thousand tons	1,365.9	105.1	52.5
Including:				
beef	Thousand tons	351.0	106.6	--
pork	Thousand tons	818.4	104.8	--
poultry	Thousand tons	146.9	106.2	--
Milk	Million liters	4,516.9	94.4	43.9
Eggs	Million	2,110.6	100.8	59.5

The drop in the amount of milk purchased in the first half of the year compared with the first half of last year resulted from the decreased cow population in the nonsocialized sector of agriculture, disruptions in the transport of milk to purchasing centers in winter time, and diminished amounts of bulk fodder stocks.

In the first half of the year tractor supplies to agriculture reached 30,700 units. At the end of June the total number of tractors in the entire agriculture was about 522,000 and was about 4 percent higher than at the end of June 1978.

Concentrated feed sales to agriculture remained at the previous year's high level.

Investments and Construction

Investment expenditures in the socialized sector of the economy amounted to 213 billion zlotys and were down 13.9 percent in comparison with the first half of 1978.

In the first half of the year 12 projects of particular importance for the national economy were turned over for use. Among these were:

--Three turbine sets, each with a capacity of 125 MW, in the Porabka-Zar pumped-storage power station;

--A second excavator-conveyor belt-dumping conveyor system along with first opening of the working level in the overburden of the brown coal mine in Belchatow;

--An ingot-free copper rolling mill department at the "Cedynia" Copper Plant in Orsk;

--Expansion of the cold rolling mill in the "Lenin" Steelworks;

--A poultry plant in Poznan;

--Dairies in Szczecin and Karczew;

--A refrigeration unit at the fruit and vegetable freezing and processing plant in Przysucha.

Among others, six projects of particular importance for the national economy were not turned over for use.

Basic production in socialized construction and assembly enterprises was down 9.7 percent in comparison with the first half of 1978. The National Socioeconomic Plan for 1979 envisaged a 1.8 percent drop in basic production. Average employment in the first half of the year was

1,065,900 and was 1.7 percent lower than in the same period of last year. Labor productivity dropped by 4.9 percent during the first half of 1979 compared with the 2.9 percent drop envisaged in the National Socioeconomic Plan.

Transport and Communications

Due to the winter, floods and threats of flood in large regions of the country there were serious difficulties on railways and public roads. It was necessary to limit railway as well as road traffic along many sections or to considerably reduce traffic speed. This contributed to the underfulfillment of transport needs and caused many disruptions in the operations of economic units.

The socialized transport enterprises carried 762.9 million tons of freight, which was 5.5 percent less than in the first 6 months of 1978. The transport of passengers by socialized public transport was 4.3 percent less compared with the first 6 months of the past year and amounted to 1,682.5 million passengers.

In the first 6 months of this year Polish State Railways transported 226.6 million tons of freight and 541.4 million passengers. Freight transport was 7.5 percent less and passenger transport 3.7 percent less than during the first 6 months of 1978. The delay of freight cars continued to intensify. Also the number of damaged freight cars increased.

Standard-gauge rolling stock deliveries in the first 6 months of 1979 amounted to: 59 electric locomotives, 103 diesel locomotives, 5,042 freight cars and 80 passenger cars.

From January to June 1979 public and branch motor transport carried about 490.3 million tons of freight which was 4.2 percent less than last year. Passenger carriage by public motor transport decreased by about 4.5 percent.

The reserves of hard coal at coal mines at the end of June were 5.8 million tons, i.e., 3 million tons more than at the end of June last year.

Cargo transport by sea totaled 17.7 million tons and was 11.8 percent less than during the first 6 months of 1978.

In the commercial sea ports about 30.8 million tons of freight were transshipped, i.e., about 4.2 million tons (11.9 percent) less than in the first 6 months of the past year. The sea ports are catching up with the backlogs in transshipments from the first 3 months of this year (in the period from January to March 1979, about 5.7 million fewer tons of freight were transshipped than during the first 3 months of 1978).

The total value of communications services, compared with the first 6 months of 1978, increased by about 5.8 percent. As of 30 June 1979, the number of telephone subscribers amounted to 1,798,900, and was about 39,200 more than at the end of 1978.

Foreign Trade

The foreign trade turnovers (at current prices) in the first half of 1979 increased by 6.9 percent compared with the same period in 1978.

The value of exports was 23.5 billion foreign exchange zlotys, which means an increase of 10.2 percent, and the value of imports was 22.8 billion foreign exchange zlotys, i.e., it increased by 3.7 percent.

During the first 6 months of 1979 the turnover with the socialist countries intensified (an 11.5 percent increase). It resulted in a further increase in the share of that group of countries in the total value of foreign trade turnovers from 57.1 percent in the first 6 months of 1978 to 59.6 percent in the first half of 1979.

The implementation of the comprehensive program for cooperation and development of socialist economic integration of the CEMA countries had a decisive impact on the increase in the turnovers with these countries. The value of the turnovers with the CEMA countries increased approximately 11.6 percent in the first half of 1979.

The value of the turnovers with the capitalist countries in the first half of 1979 rose by 0.8 percent, while exports rose by 2.7 percent and imports decreased by 0.7 percent which had an influence on the further improvement of the commodity turnovers balance.

The value of exports of products of the electromachinery industry (together with the construction installations) increased by 17.9 percent, and the share of this group of products in overall exports rose from 47.1 percent in 1978 to 50.3 percent in 1979. There was a significant increase in exports of complete industrial installations, the export of construction, deep-sea fishing vessels, computers, mining machinery and equipment, crane-transport machinery and equipment, equipment for the electrotechnical and electronic industry, farm machinery, and household appliances in the electromachinery industry products group.

CSO: 2600

MINISTRY OFFICIAL DISCUSSES PROBLEMS, OUTLINES POLICY IN DOMESTIC TRADE

Warsaw HANDEL WEWNETRZNY in Polish No 2, Mar-Apr 79 pp 1-10

[Article by Edward Wiszniewski, Deputy Minister of Domestic Trade and Services: "Problems of Market Supply and Trade Policy in 1978-1979"]

[Text] Tasks proceeding from the structural and qualitative transformations announced at the Second National PZPR Congress form the basis of trade policy for 1978-1979, as well as for 1980. Confirming the correctness and need for substantiation of the overall strategy of national socioeconomic development, the conference recommended at the same time more vigorous and concrete actions aimed at creating conditions for successful accomplishment of the targets of the 1976-1980 Five-Year Plan and the entire decade of the 1970's in that area pertaining to growth in consumption and living standards.

The changes effected in 1978 were barely an indication of those transformations, merely a beginning, but the choice of the period in which they are taking place is significant, for experience indicates that the third year is critical for achieving the targets of every five-year plan, since it determines reaching of the halfway point and usually defines the scope as well as pace of the country's development in the final 2 years of the five-year plan. In this situation a deepening of the structural-qualitative transformations should take place precisely in 1979-1980, which in effect will lead to elimination of market stresses and at the same time will make it possible to gain a better picture of the goals of the following five-year plan.

In addition to the above, 1978 was distinguished by an additional feature, as it was the 8th year of the decade in which is being implemented the policy of the Fifth and Sixth Party Congresses, a policy of comprehensive development and building of a developed socialist society.

Trade has played and continues to play an important role in aggregate socioeconomic development. Comprising an active element joining production and consumption, it determines market quality, and consequently influences to an important degree the attitude of the public toward the rate of growth and functioning of the entire economy. I need not argue the point that we seek a good market in the broad meaning of the word. By this I mean a market distinguished by a substantial scope of product mix balance, efficient organization of turnover and a high level of service to the customer.

In our socioeconomic system a steady growth in available goods and services constitutes a condition for strengthening and broadening of market equilibrium, growth corresponding to constantly changing needs of the population. We might recall that those needs have been forming during the last 8 years under the influence of rapidly growing -- at an average annual rate of more than 12% -- cash income as well as increasing production of consumer goods from an expanded and modernized industry. In the period 1971-1978 goods deliveries to the market increased at an annual average of more than 11%. The achieved level of prosperity in the urban and rural areas and a goods availability which is diversified from the standpoint of variety and use value, ensured not only meeting basic needs but also increased the level of prosperity to such an extent that the public is seeking to an increasingly larger degree goods of the highest standards, of better quality, satisfying needs other than primary as well as corresponding to current fashion trends. Difficulties in achieving partial equilibrium in certain segments of the market which are still occurring cannot obscure from us that fact.

A good market is not only appropriate, from the standpoint of quantity and quality, goods availability, but as I have emphasized, an efficient and properly functioning trade as well as an appropriate level of service to the customer.

Organizational changes made in 1976 promote greater efficiency in trade activities. Local authorities give these changes good marks in general, although the smoothness of functioning of individual elements still leaves much to be desired. There are repeated warnings about wholesale warehouses becoming autonomous and the breaking of links between them and retail merchandising. Much remains to be done in the area of eliminating organizational hypertrophy and in flattening structures. There still occur cases where a small voivodship enterprise with an office in the voivodship capital has a second office for the city proper. Therefore those people in charge of trade policy are focusing constant attention on streamlining the management of trade and its functioning.

The level of customer service is determined by many elements. Suffice it to mention acceptability of the trade network and its equipment, personnel qualifications and forms of sale.

The manpower-wage situation as well as the status of the material and technical base are determined by the weakest link in our trade edifice. As we know, among the European CEMA nations we have the lowest indices as regards percentage of persons employed in trade in relation to the total labor force and number of square meters of trade facilities floor space per thousand population. At the same time we have one of the highest figures for sales space productivity. In this situation we cannot consider adequate the progress which has been made in development of the trade network and its equipping, as well as the noted growth in employment. As a result the level of service remains far below customer expectations. In my opinion this is at the present time the weakest link in the aggregate which we define as a good market.

It is the author's intention that this analysis of the scope and certain components of a so-called good market could become an interesting point of departure and background for presenting the problems market supply and the directions taken in trade policy last year and this year, which is the substance of our further deliberation.

First we shall briefly review how things stand in the basic market segment, and then we shall discuss actions taken in 1978 to increase supply of goods, to improve the level of customer service and to streamline the functioning of trade.

The market in 1978 differed substantially from previous years in manufactured consumer goods. The status of supply of consumer durables and wearing apparel, as well as the attained level of prosperity, produced substantial changes in consumer demands. Both the consumer and trade became more demanding. Therefore not every item offered by industry could be accepted without comment or objection. Industry in turn, for various reasons, was not always able to adapt its products to the changed needs of the market. In this situation there occurred stresses at various times last year which were caused by goods deliveries failing to correspond to demands from the standpoint of variety. This applied in particular to wearing apparel and footwear, as well as certain consumer durables, such as radios, black-and-white television sets, upholstered furniture, and refrigerators.

The food market, as regards mass primary necessity articles, other than meat, was characterized in 1978 by relative quiet. Temporary shortages of fats occurred between the third and fourth quarters. Government purchases of butter abroad helped normalize the situation. Because of inadequate goods deliveries, however, there occurred a serious shortage of fresh fish, particularly freshwater fish. Demand in this area was met by only approximately 70-75%.

Supply difficulties also occurred in the third large market area, that is, in capital goods. An insufficient supply of agricultural machinery and equipment, synthetic fertilizers and certain building materials was felt particularly severely during the field work period.

The specified market situation was first and foremost a result of failure to meet the deliveries target in physical terms by more than 25 billion zlotys. In value terms deliveries exceeded the plan target, a contributing factor to which, as we know, was price increases (on alcohol, gasoline, meat at commercial prices, new and modernized articles) which according to estimate increased their value by more than 35 billion zlotys.

At the same time personal cash income exceeded the target by more than 40 billion zlotys, a 9% increase in comparison with the targeted 6.6%. Therefore the index specifying growth of goods deliveries in relation to personal income was 1.01 instead of the targeted 1.38. Thus a goods gap in relation to plan targets was formed, which is estimated at approximately 66 billion zlotys, that is, more than 5% of targeted goods deliveries.

The difficult situation in the goods market was aggravated by failure to meet targets in the broad services area by 5 billion zlotys. Failure to meet the public's demand for services increased pressure on goods, and for the most part on the most highly-desired items.

How can we characterize in general, on the background of what we have stated, the market situation in 1978? Without question it was a difficult year. The goods shortages and stresses which occurred, however, were not the result of ignorance or poor knowledge of the public's needs and goods demand, but were caused by the still inadequate, although considerably greater and more attractive than in preceeding years, supply of goods as well as above-target growth in personal income, which was not backed up by additional production of goods for the market.

The market situation demanded action on the part of officials in charge of trade policy as well as trade organization management. Two directions can be distinguished in the actions which were undertaken; the first -- systems action, encompassing problems and methods of resolving them not only for today but for tomorrow as well; the second -- short-term, emergency actions, producing fast effects.

Both long-term and temporary emergency actions undertaken in 1978 dealt both with goods management and operation of trade. We shall first discuss the most important system actions pertaining to goods management, and then the area of trade administration and management. Further on in the article we shall briefly discuss emergency-type actions.

In order to ensure adequate supply, we introduced in 1978 a three-level system of supply deliveries monitoring as regards product mix. This system covered 70% of the total value of goods deliveries and more than 700 items. Each month approximately 200 articles (commodity groups) were checked by the Council of Ministers, more than 200 items were checked by the Ministry of Domestic Trade and Services as well as supply ministries, and approximately 300 items were monitored by industrial associations and central trade organizations.

The above-mentioned verification checks elucidated that in spite of pressures and, in cases of glaring culpability, application of penalties during the course of the year, in up to 30% of product items deliveries were below the plan target, while for 10% of items the figure was below that achieved in 1977. It is true that the scale of shortages is small, for it amounts to barely 2% of the value of total goods deliveries; however, taking into consideration the poor level of satisfied demand precisely for these goods, public response to the shortages was considerably greater. The experience of last year indicates that it is not sufficient merely to monitor implementation of product mix deliveries, for in a certain sense this is ex post facto action. The point is to prevent production which is not in conformity with demand. Hence the conclusion that there were lacking in this system elements which could ensure that the results of these verification checks became a basis for drawing up efficient production schedules. This unquestionably

would promote better adaptation of what industry produces to the needs of the market.

In 1978 stocks management was also incorporated into the system. Periodic analyses of inventories broken down by goods assortment were introduced. Many actions were undertaken to prevent increase of excessive stocks on hand. The reasons for excessive inventories to be increased from current goods deliveries were corrected. We should mention here utilization of the conclusions from a review of stocks for obtaining orders during the recent national Poznan Trade Fair, as well as stepped-up organization of trade fairs and end-of-season sales. An important role in streamlining stocks management was also played by shifting of stocks between voivodships and trade organizations, as well as stepped-up amassing of goods in retail trade. All these measures resulted in overfulfillment of the sales plan target with an increase in stocks on hand to the plan-targeted level.

The system also encompasses amassing and management of goods designated for so-called goods exchange. A determining voice in these matters was secured for the Ministry of Domestic Trade and Services. First steps were also taken to increase goods availability for the Minister of Domestic Trade and Services as regards import of goods from the socialist countries.

As I have mentioned, system actions also applied to improvements in the functioning of trade, also covering cooperation with the Voivodship Offices and Voivodship Market Councils (WRR), new forms of sales, and a modified economic-finance system.

Of course cooperation between the Ministry and local authorities is not new. It had not had, however, integral solutions, was not, to use a popular term, comprehensive. Establishment of WRR produced changes in this area. Periodic Council sessions, with the participation of ministry officials, the problems which were the agenda of their deliberations, participation by top Ministry officials in sessions of the Voivodship People's Councils (WRN) dealing with trade, as well as periodic meetings between top officials of the Ministry of Domestic Trade and Services and directors of the Trade Departments of the Voivodship Offices have ensured continuous as well as increasingly better information on local markets and their needs, and at the same time have made it possible for integral and authoritative ministerial information on the domestic market situation as well as actions and plans undertaken by the ministry.

One expression of assistance to the voivodship governors in understanding local markets more thoroughly was the Minister's decision for regional market research establishments to be set up by the Institute of Domestic Trade and Services.

A new agency system was elaborated and introduced in 1978, officially called a contract on terms of ordering. I shall not discuss the details of this system, since much has already been written on this topic. I should like to emphasize that the idea behind this system has fully proven itself. Small

stores are better utilized, goods availability is better, and the level of customer service is improved. An enterprise obtains additional employment-wage funds. As of the end of 1978 approximately 6,500 retail sales establishments were operating in the new agency system.

At this point we must mention the adoption of such forms and categories of sales as specialized foodstores, stores carrying home furnishings, etc. The idea behind development of these forms of sale boils down to achieving greater efficiency of purchases (meat), raising the level of customer service, and increasing the variety of goods available. By the end of 1978 440 specialty foodstores had gone into operation, approximately 6% of the total number of socialized stores, including meat, ham and sausage stores.

Substantial changes are planned for the present economic-finance system. New system principles were elaborated in consultation with central trade organizations, principles which substantially simplify the formula of calculating available wage fund, personnel management, as well as utilization of funds for certain capital spending.

Since we are discussing system actions as regards the functioning of trade, we must mention material elaborated jointly by the PZPR Central Committee Department of Light Industry, Trade and Consumption and the Minister of Domestic Trade and Services. This material was submitted to the political bureau. It contains an analysis and recommendations pertaining to modernizing the operation of trade, as well as a long-range program for implementing these recommendations. Minister A. Kowalik discussed this subject in detail in HANDEL WEWNETRZNY.*

Temporary and emergency actions by the ministry were in response to developing market situations as well as an immediate, vigorous response to tasks proceeding from the annual plan. Suffice it to mention current analyses submitted to the Committee for Domestic Market Affairs on quarterly goods delivery agreements undertaken by trade with supplier ministries, on assistance to local authorities and trade organizations in difficult local market situations, and on intervention purchases both with funds of the Committee and of the Minister of Domestic Trade and Services.

I have presented here only certain problems dealing with the functioning of trade where some effect has already been achieved in solving them. I have not discussed problems which require further measures. That is a numerous group. Suffice it to mention occurring parochialisms, both of voivodships and trade organizations, pertaining primarily to deliveries and supplies. Frequently this has made it difficult to reach a uniform position in regard to suppliers. The developed organizational structures as well as insufficient integration between the individual services and elements time and again hampered efficiency of enterprise actions. Inadequate development of

* A. Kowalik: "Basic Directions for Modernizing Trade," HANDEL WEWNETRZNY, No 1, 1979.

flexible forms of employment had an adverse effect on employment indices and wage fund.

Insufficiently consistent and to some extent also uncoordinated implementation of capital investment policy on the part of certain central trade organizations resulted in dissipation of the already limited funds allocated for trade.

Another problem which has not been fully resolved is the little effectiveness of utilization of funds obtained from the Committee for Domestic Market Affairs for stepping up market production and sales. Frequently the cause is excessive time from manufacture to retail purchase, while often it is simply a result of disinterest by the parties involved.

On the whole trade ended last year with progress in supplying the public as well as with improvements in the functioning of certain elements in the trade system. Important in my opinion is the fact that the trade people are aware not only of positive things but also of shortcomings which occur both as regards supply and effect on the consumer and the market. Trade is entering 1979 armed with the knowledge not only of what it wants but also how it intends to achieve the specified goals.

The principal task of the National Socioeconomic Plan for 1979, as formulated by the Sejm resolution, is achievement of further progress as well as better utilization of the current capabilities of the economy, as well as improved adaptation of the economy to changing needs and economic conditions.

The basic plan targets constitute the measure of progress and at the same time a measure of effort of our economy. Generated national income should rise by 2.8%, and divided income by 1%. Growth in sale of goods and services produced by Polish industry will be 4.9%. Market supply deliveries of Polish-produced goods will rise by 7.7%, with a total increase of 9.1%. Deliveries for export will increase by 9.6% in order to achieve a decrease in the foreign trade deficit. Cash personal income will increase by 7.9%.

Market supply of goods was examined particularly carefully and thoroughly in the aggregate of work done on the plan for this next year. All phases of this work were characterized by close cooperation and continuous working contacts as well as consultations between the corresponding industrial ministries and trade. The Committee for Domestic Market Affairs as well as the Planning Commission rendered great assistance in bringing together diverging views.

In effect the plan specifies the total value of goods deliveries at 1,371 billion zlotys. This signifies maintaining in the next year of the current five-year plan the high growth rate (109.9%). It exceeds by more than 1 percentage point the targeted growth of personal purchasing power.

The plan does not contain a reserve for the case of personal cash income exceeding the target figure or spending by the public of funds already possessed for the purchase of goods while reducing savings or other expenditures,

such as for services. Therefore throughout 1979 the problem of matching market deliveries to purchaser needs must occupy the center of attention of the ministry and central trade organizations. Toward this end the three-level system of monitoring goods deliveries for a variety, introduced in 1978, will be maintained. Goods lists, appropriately verified and adapted to the current market situation, contain approximately 600 items, approximately 200 of which will be monitored by the Council of Ministers.

Implementation of the joint (trade and industry) determination of the planned character of orders by trade can play an important role in day-to-day matching of goods mix to purchaser needs. On this basis trade organizations will cooperate in communicating through the industrial ministries to subordinate production enterprises quantitative targets in the area of production and delivery to market broken down by product assortments. I need not mention that these assortments correspond to those contained on the goods lists.

Greater discipline in production as regards product mix will also be promoted by the decision contained in the resolution on the national socioeconomic plan that for purposes of meeting the payroll fund in industry the total value of goods moved by individual ministries will be reduced by the value of unachieved product mixes (contained on the three lists), even if the overall value exceeds plan targets. One must assume that this addition to the principles of the system will prove beneficial to the market. I have mentioned the strange relationship between the value of goods deliveries and the public's purchasing power. In this situation there is a need fully to utilize the obligation, specified in the national socioeconomic plan for the industrial ministries, to revise disadvantageous production capacities in connection with limiting production for capital investment purposes. Close cooperation between trade organizations and production plans in determining capabilities and investigation of the conditions involved in changing production specialization can result in an increase, above and beyond the specifications of the National Socioeconomic Plan, of deliveries of goods in demand on the market.

In order to increase market supply, there has been initiated with the active participation of local authorities the acquisition and sale of waste materials of wood, metal and plastics, which up to the present time have not been marketed in an organized manner, materials suited for household or hobbyist use. At the same time voivodship trade enterprises are obligated to organize a network of suppliers and sales facilities for topsoil, peat, seedlings, and articles useful in growing household plants, home gardens and worker garden plots. These initiatives should first and foremost promote increased supply in local markets, although in many cases they may also be useful on a larger scale as well.

Production from small-scale manufacturing should be a more effective source for increasing market supply than up to the present time. It is anticipated that further growth of small-scale manufacture will occur not only through increased production capacity at existing plants but also by putting new production units into operation, including more extensive production facility

financing than up to the present time. A principal role in promoting this area of manufacturing should be played by local authorities and the Voivodship Market Council, with substantial assistance from the Committee for Domestic Market Affairs and some industrial ministries, particularly in the area of raw materials and supplies.

Domestic supply is supplemented by imports. The plan for 1979 calls for maintaining import's 7% share in total value of goods supply to the domestic market. Increased imports from the socialist countries (an increase of 12%) over 1978 requires elimination of barriers still occurring here and there (for example, quotas), as well as better knowledge of future import potential from those countries. It would seem necessary for the Ministry of Foreign Trade and Maritime Economy to elaborate in this area a special system of information or assignment of such an obligation to TORIMEX representations in the CEMA countries. Imports from capitalist countries in 1979 will involve, just as in the past, primarily foodstuffs not produced in this country.

Further development of so-called goods exchange both with socialist and with capitalist countries will also have an effect on diversification of market supply. With this goal in mind, at the beginning of the year the Ministry of Domestic Trade and Services will specify among market supply goods those items which will be subject to this exchange. There should be an increase of 12-15% over 1978. Change in the criterion of its effectiveness should significantly facilitate development of exchange. In my opinion at the very least equivalency of overall value between import and export, not the price relations on individual items should be recognized as the basic criterion.

The above-described sources and magnitudes of goods deliveries constitute the bulk of supply of goods on the market. The remainder consists of stocks on hand in retail trade and in wholesale warehouses. Proper management of these stocks of goods can help enhance trade supply. In 1979 there will occur a further deepening of the already elaborated and presently-adopted system of making the disposition of available stocks more flexible. Hence the entire trade edifice has the task of intensifying sale of full-value goods supply of which exceeds current demand. It is necessary to streamline organization of turnover of these goods as well as to eliminate barriers impeding a broadening of the sales front for these goods. To achieve this objective it is necessary optimally to utilize installment credit in the amount of 13 billion zlotys, that is, almost 3 billion zlotys more than last year, and it is necessary substantially to step up advertising and all forms of out-of-store sales. The plan presents conditions for revaluing goods independent of the possibilities of discounts, which are figured as part of costs. An amount totaling 16 billion zlotys for losses and revaluations, etc, should be utilized first and foremost for reducing prices on seasonal and nondurable items. In order to expend these funds efficiently, it is necessary at the same time to practice more stringent quality acceptance, so that only goods of suitable quality specifications reach the consumer.

Thus not only action will be taken which increases the effectiveness of management of available funds, but also performance by trade of such an important social function as protection of the interests of the purchaser. The above-described measures should ensure maintaining stocks at the level specified in the plan. In 1979 growth of stocks of goods should total 25 billion zlotys, as compared with 22 billion in 1978.

An important element of management of goods on hand is proper direction of so-called extramarket sales. The plan specifies 214 billion zlotys for this purpose. This is approximately 15 billion larger than the 1978 figure. In order strictly to maintain the magnitude and structure of extramarket sales, the list of goods has been updated, the principles to be followed in issuing permits have been specified, and voivodship governors have been assigned limits which they will divide among socialized economic units. There has been established in the ministry a reserve of funds for the "extramarket" in an amount which will permit flexible management of goods earmarked for those purposes throughout the entire year.

An important element of management of available stocks is their distribution among voivodships. Since last year the voivodships have had the authority to distribute short-supply goods among trade organizations operating in the voivodship and among gminas. There is occurring continuous improvement of the principles which guide the ministry in territorial management of these goods, on the basis of comments by local authorities and the ministry's own experience, as well as assessments of a voivodship's needs, objectivized to the extent the ministry has knowledge of the matter.

Up to this point we have discussed trade policy measures ensuring goods which correspond to needs, both as regards quantity and variety. These actions, as an analysis shows, take into account the principle of efficiency of management and utilization of reserve potential existing in our economy, including in trade. In subsequent development emphasis will be placed on those directions of trade policy which ensure efficiency and better functioning of trade.

We should emphasize at the outset that the National Socioeconomic Plan specifies strengthening of the position of the Minister of Domestic Trade and Services in relation to overall market trade. Suffice it to mention that the Minister has been empowered to make changes in the specifications of the National Socioeconomic Plan for individual trade organizations if these changes do not change the overall quantities specified for trade. This applies to all indices and quantities contained within the National Socioeconomic Plan. Changes made by the Minister do not require any approval. An equally important new power is the Minister's authorization to specify categories of services which will be billed according to the net indicator, that is, after subtracting from the value of the sold services the value of materials. This widely-adopted method of billing for services should not only facilitate utilization of service establishments by customers possessing their own raw materials but will also make it possible to estimate the actual value of the service proper.

It follows from the cited information that the statement about coordination of the Minister's role in relation to participants in the market, enigmatic up to the present time, has been replaced by concrete powers.

The plan specifies relatively modest funds in the area of employment, wages and capital spending. Hence the necessity for maximum efficient utilization of these funds, further increase in labor productivity as well as productivity of sales facility floor space. Each and every hour of work by salesperson and store will count. In this situation trade organizations must eliminate sales interruptions, which are burdensome on the customer, caused by deliveries of goods, inventories and repairs. This can be secured by better scheduling of repairs and increasing the number of deliveries to stores other than during store hours, as well as an increase in the hiring of part-time employees. The plan allocates 250 million zlotys for increasing employment in this form. Particular importance is acquired by proper organization of transport of goods, systematic increase in containerization, faster readying of consignments for delivery on the part of the shipper, as well as modification of trucks for carrying containers.

In light of what I have stated above it is obvious that improvements in the level of service ca[illegible]t be achieved solely by utilization of the existing trade network. The fund[illegible]ecified for trade in the plan, in the amount of approximately 2,50[illegible] million zlotys, are sufficient only for continuing already initiated capital [illegible]ects, even this at a pace slower than scheduled. Hence the necessity of co[illegible]entrating manpower and resources on rapid completion of at least some facilities. At the same time, with an eye to the future, we should already today begin building new facilities such as market halls, supermarkets, and department stores.

Obtaining floor space in new apartment buildings is acquiring particular importance in the difficult capital spending situation. The plan for 1979 calls for turning over more than 360,000 square meters for public-service needs. The experience of past years indicates that targets in this area are only achieved by 50%. Hence in 1979 trade organizations, with the assistance of voivodship governors, should ensure acquisition of the total quantity of floor space specified for trade and services. I need not recall that representatives of voivodship political authorities have unequivocally stated their position in this matter.

The development of agencies should also bring an improvement in the functioning of the trade network. It is anticipated that by the end of 1979 14-15 thousand retail sales locations will be operating in this category. By decision of the Council of Ministers the agency system is being expanded to include public food establishments and service facilities. Achievement of targets in this area will make it possible to achieve further improvement in utilization of the facilities of trade, public dining establishments and other services, will streamline the operations of small facilities which in the past have frequently been unprofitable, and should result in improving service to the consumer. Enterprises can designate employment-wage funds obtained by transferring sales facilities and food service establishments for newly-opened stores and increasing the work force in large trade units.

just as took place in 1978, small eating establishments as well as food stores and specialty meat stores will experience development this year.

An increase in initiative and innovativeness in trade is a condition for successful implementation of the above-discussed trends in trade policy. I hold the view that these actions in trade should encompass all elements, from ministry to retail store. Ministry personnel, and particularly ministry activists, are pledged to create conditions and to make every effort to promote progress, both technical and organizational. Scientific research support facilities, particularly the Institute of Domestic Trade and Services, and design offices play a particular role in this area. Recommendations produced by research projects, and particularly results of solving a key problem, must find practical application. Designing of trade facilities should be based on modern solutions, standardization, and industrialized construction methods.

Organizational advising services offered by ORGPOST are becoming increasingly important. Elaboration of a model of an efficiently operating enterprise and most efficient utilization of each work station are the principal tasks of this organization in 1979.

The new status of store operations based on enterprise intensive utilization of the internal capabilities which are at the disposal of this basic trade unit should become an important element in modernizing organizational solutions. An enhanced role for the store manager and organizer of the sales process, who is responsible for operation of the facility, for order and procedures, efficiency and quality of servicing should be accompanied by greater authority in the area of direct management of the facility, including the power to hire and to purchase some equipment.

Institute of Domestic Trade and Services local divisions and establishments should also be designated this year. Their principal tasks include study of sector and regional markets as well as cooperation with Voivodship Market Councils in streamlining the functioning of trade. In this context I attach great importance to implementation of the ministry information service program.

It follows from what we have stated above that 1979 will not be an easy year for trade. Our economy does not possess great potential at the present time for a more appreciable improvement in market supply, as well as capability to provide more funds for the development of trade and services facilities. Hence the necessity of unifying the efforts of all officials responsible for and working for the market, in order to achieve to a maximum degree the targets specified in the National Socioeconomic Plan for 1979.

3024
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POLAND-FRG 'POLONIA' TRADE CONTACTS NOTED

Warsaw TRYBUNA LUDU in Polish 27 Jul 79 p 6

[Article by Janusz Moszczenski: "Close Ties With the Native Country"]

[Text] B. K. Budny manages the "Industrievertretungen Comecon" trade agency in Gummersbach (North Rhine-Westphalia) which he established several years ago and which is oriented mainly towards the development of economic relations with Poland and other socialist countries.

Born in Ruda Slaska, the son of a Silesian insurgent, a foundry worker from the "Pokoj" (Peace) Foundry, wounded at Czeladz in 1920; he has kept as the greatest family keepsake the certificate of the Silesian Cross of the Uprising (Slaski Krzyz Powstanczy) accorded to the father. It carries the date of 27 September 1947 and was signed by the [then] Minister of National Defense, Marshal Michal Rola-Zymierski. He is proud that he comes from a Silesian family having such beautiful patriotic traditions.

During the war, fate brought him to England. He volunteered for the Polish Navy and fought on the ORP "Krakowiak." The victorious battle of his destroyer with the five Hitlerite motor torpedo boats in the La Manche ca ıal 35 years ago is engraved in his memory forever. After the war he sailed on British merchant marine and passenger ships, attaining the rank of officer-mechanic third grade. After taking an Irish bride, he sailed for a while on ferryboats and then began to work in London with the well-known British chemical firm BTR. At the beginning of the 1960's the firm named him the general representative in the FRG. Several years ago, B. K. Budny established his own enterprise but continued as the BTR repre- ɛntative.

'e visits his native country often. He maintains active trade contacts with CIECH, STOMIL, BUMAR, Warynski, CENTROMOR, and other Polish agencies.

He prides himself on the cooperation with Polish industry and foreign trade. He is filled with the highest admiration for the reconstruction of the country, the rate of industrialization, and, in general, for the rapid development during the 35-year period.

"I remember pre-war Poland," he shares his impressions. "It is surprising how much has been done in such a short period of time. As many times as I visit Poland and my native Slask, I cannot but be surprised at the extent of industrial and residential construction and for the vastness of investments which will, before long, bring great perceptible benefits to entire generations of Poles."

In January 1974 I was at the construction site of the Katowice Iron and Steel Works. My firm supplied, among other items, hydraulic fixtures for the excavators from the Warynski [enterprise] being used there. "When professional matters brought me back here again after 5 years, I was speechless. The scene exceeded all expectations. What a tempo of work. What a magnificent combine-colossus. The 10-kilometer construction of the belt conveyor, by which Soviet ore is to run from the loading station to the combine. BTR is producing a rubber belt of this type with a steel line. We have put in bids...."

B. K. Bundy is vice president of the Polonia Association for Economic Cooperation with Poland in the FRG. It includes several entrepreneurs and businessmen of Polish origin. Every year they participate in a Polonia economic forum organized by the Association for Liaison with Poles Abroad "Polonia" in Poznan held during the trade fair. They believe that these meetings are very useful and bring concrete results for cooperation and economic exchange of Poland with foreign countries. The Polonia entrepreneurs in the FRG assume, or plan the establishment in Poland of various production plants of a cooperative nature. B. K. Budny intends to launch the production in Poland of metal-plastic window frames. One of the members of the Polonia Association for Economic Cooperation with Poland in the FRG has already established a plant in Zielona Gora voivodship for manufacturing parts for television sets.

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STANDARDS SUPPLY VALUE ANALYSIS DEFINITION, APPLICATION

Bucharest REVISTA ECONOMICA in Romanian 20 Apr, 4 May 79

[Article by Petre Biristeica and D. Alex. Baleanu (Parts I and II): "State Standards - 'Value Analysis'"]

[No 16, 20 Apr 79 pp 15-15]

[Text] The Principal Objective in Updating Products - Superior Performance at Minimum Costs

In the current stage of development in our national economy, the complexity of material production and the demands for conserving social labor in all phases of economic activities and for raising the technical, qualitative level of all products especially require the systematic tackling of the problem of decreasing the amount of current and past labor and the reconsideration of certain analytical instruments and actions necessary to attain these major objectives. In this context, a special role is played by using the method of value analysis on an even broader scale.

The action initiated back in 1971 by the "Stefan Gheorghiu" Academy for the organization of certain higher education training and specialization courses for personnel in value analysis and the carrying out of certain practical applications in diverse economic units in the country, actions efficiently suuported by the majority of the territorial offices for economic-social organization and the training centers of certain ministries, as well as by REVISTA ECONOMICA, led to the understanding and use of this method by many specialists in planning enterprises and institutes, creating the premises for its broad introduction in our economic practices. Similarly, within the framework of measures adopted by the party and state leadership for increasing the efficiency of economic activities and reducing production costs, in the fall of 1976 the Special Program was drawn up for the generalized application of value analysis on the scale of the entire national economy.

In order to help the specialists who were to apply this method, especially for those working in the research-planning and technological engineering institutes, the National Council for Science and Technology initiated

the drawing up of a standard composed of many parts that was to contain specific ideas and methodologies-frameworks for the use of value analysis in diverse fields of activity.

Following the presentation of the essential elements representative of the method and making available to those interested certain practical working methodologies, in the elaboration of the standard they kept in mind specific ideas and traits characteristic of the method that had been already defined or theoretically justified in specialized literature on the subject, as well as the experience of using value analysis both in our country and in the economically developed countries, where it has been applied for many years with very good results*. Similarly, they kept in mind that the area of application of the method is expanding and that the method itself will develop and improve as a result of the conclusions obtained in practice and of the appearance of new work techniques and procedures. For that reason, they ensured that there would be the opportunity, within the framework of the stages and phases outlined in the methodology, for the work collectives applying this method to select from the multitude of techniques and procedures recommended by diverse authors, including program packets drawn up for computers, those procedures which they feel are the most adequate and which best correspond to the complexity of the object under analysis and the technical, economic and organizational conditions of the unit, for the proper solution of the given problem.

Keeping the above in mind, we feel that the methodology in the standard must be regarded as an important contribution to the integration of this method into the planners' work schedule -- and not as a new, distinct action of the tasks outlined in the state plan regarding the production of new products or the modernization of existing ones. Likewise, we feel that the Special Program for the generalized application of value analysis to the entire economy is not pursuing the division of technical plan tasks into two categories -- those to be carried out through value analysis and others without using this method. As a result, we do not have to add a theme for a distinct project of value analysis to the planning theme for certain new products or for certain existing products, in other words, to have two plans with distinct themes or derivation, one from the other, but both the theme and the plan must be unique.

Under this aspect, regarding the work, there is the unjustified opinion, which circulated either as an expression of certain holdovers or mistaken understandings or as a front for certain complaints that have nothing to do with the method itself, that the application of value analysis would require changes in the work system, in the content and execution time of the project, in the succession of the approval phases, in the addition of planning personnel, and so forth.

*Standards for value analysis were introduced in West Germany (1973), Austria (1975), East Germany (1975) and so forth,

Through the specifications outlined in the standard, referring to dealing with planning themes, they pursued the better justification of adopted technical solutions, especially in deeply studying the economic facets of these solutions.

Value analysis is defined in the standard as "a systematic and creative research-planning method which, through a functional approach, aims at having the functions of the object under study conceived and achieved at minimum costs, under conditions which satisfy the needs of the user in accordance with social-economic demands."

The standard was structured in many parts. For the beginning, the first two were drawn up: "Value Analysis. General Concepts" (STAS 11,272/1-79, going into effect on 1 January 1979) and "Value Analysis. Application of the Method to Products" (STAS 11,272/2-79, serving as recommendations).**

The first part of the standard presents the purpose, characteristics, objectives, fields of use and the specific principal terms of the method. The definition or clarification of certain terms and the establishment of a consensus upon the content of certain frequently used ideas were necessary since there is a great diversity of opinion in the specialized literature, some of it contradictory, regarding the content of the ideas in the terminology used.

As is known, the key idea with which value analysis operates is the function, in its relationship with the environment and the user, as an essential trait of the object under study. Since the entire mechanism of the method begins with the corrent identification of the functions, the classification of these functions according to different criteria which characterize the use value has a special role in guiding the planners. Thus, according to their importance, the principal functions are identified, corresponding to the principal purpose of the object under study, and (in their complexity) the secondary or auxiliary functions, which contribute merely indirectly to the use value of these functions, are determined. Frequently these latter functions are determined by the technical solutions adopted. A rationalization of the solutions can lead to the elimination of the auxiliary functions and their afferent costs, without the use value suffering.

**The standard is drawn up by the Central Institute for Management and Information in collaboration with: the National Council for Science and Technology, the "Stefan Gheorghiu" Academy, the Academy of Economic Studies, the State Planning Committee, the State Committee for Prices, the Ministry of Technical-Materials Supply and the Review of the Management of Fixed Assets, the Ministry of Industrial Construction and the Ministry of Light Industry.

The distinction must be made between this classification and the one according to the criterion of utility, which points out that some functions are necessary, while others are not, and the object studied can very well dispense with those since they do not coorespond to the real needs of the user. The simple recognition of the non-useful nature of some functions during the replanning of the object studied opens up ways for savings by eliminating them and their material support. For this reason, in differing from the functions existing at the time of the analysis, the new functions, attributed to the object after the value analysis is carried out, must be exclusively necessary and derived from the user's requirements.

Some authors, regarding as absolute the mathematical aspect of the method, only recognize, or give priority to, the measurable functions. To allow this point of view would mean diverting the attention of the planners from the scientific interpretation (through investigations, statistical studies and so forth) of certain necessary functions that are characterized by psychosensory and social effects -- organoleptic and esthetic aspects, fashion, prestige and so forth -- that are products of the object under study. For that reason, the standard, on the contrary, permits objective and subjective functions. Both categories are valuable for the principal functions; a subjective auxiliary function means, by definition, a waste.

In the standard, other frequently used concepts are also defined for value analysis, such as: the list of functions, the level of importance of functions, the technical and economic dimensions of certain functions, non-useful costs and others.

In specifying the technology used in the application of value analysis, a very important concept is similarly introduced: the term "cost limit," defined as the maximum allowable cost for the realization of a function or the object under study. The establishment of a cost limit from the very beginning for each case in which the planned or replanned object must be placed using value analysis requires for optimum correlation the satisfaction of the user's demands with respect for economic criteria.

With regards to the object of the value analysis, it states that it can be a product or components of a product which fulfill one or more functions, a technology or parts of one, an activity or a succession of activities, an objective or an investment project and so forth. It should be noted that the possibility of applying the method to components (to items, subassemblies, assemblies) of a complex product with a large number of very large number of items considerably broadens the planners' field of initiatives. One of the conditions that must be taken into account in selecting certain parts of the product for value analysis is functional unity and the fact that it must fulfill a functional role within the framework of the product. The object of the value analysis permits numerous fields of use for the method: research and design of new products and the modernization of those in current production; research and design of new technologies and the modernization of

existing ones; the improvement of service and auxiliary processes in economic units; services; design and achievement of investment programs; the improvement of the work process and so forth. Each of these fields presupposes specific methodological elements and (as experience has demonstrated here in our country and, more significantly, in countries where the method was introduced long ago and more broadly) in all value analyses important savings are made in material costs and/or labor costs.

Depending upon the technical-economic and social indicators specific to these fields and keeping in mind the nature and complexity of the object under study, the standard establishes the objectives that are to be realized through the application of value analysis. These objectives fully correspond to the tasks established by the party leadership, regarding the accentuation of the qualitative aspects of economic activities,*** such as:

-- increasing the use value of the object analyzed and reducing the production costs, especially material costs. In the end, they seek a relationship between the use value and the production costs of the object under study that is at the maximum;

-- improving the quality of products and services;

-- improving working and living conditions;

-- increasing labor productivity.

By working with the general concepts in the standard and clarifying the objectives they pursue and correctly identifying their functions, the specialists who use value analysis will be able to apply the method in a unitary manner, enriching the practice of using this precious working instrument.

In a future issue of this magazine we will present the second part of the standard -- the application of the method to products.

*** Editor's Note: From this point of view we feel that among the principal objectives we cannot forget reducing the consumption of energy involved in making the product. The updating and modernization of products and technologies must be firmly directed according to this priority criterion.

[No 18, 4 May 79 pp 17-18]

[Text] Coordinates for the Efficiency of Collective Creation

The action of spreading the use of value analysis throughout the entire economy according to the Special Program drawn up nearly three years ago benefits from a practical instrument, useful to the planners and other specialists in the unitary application of the method, by moving forward to the drawing up of the standard "Value Analysis" (STAS 11,272-79) (the first part of the standard was presented in No 16/1979 of REVISTA ECONOMICA).

The method is characterized by interdisciplinary group work using a systematic analysis of the functions and calling upon analytical and intuitive methods and techniques, as well as other methods, techniques and procedures specific to scientific research and planning, such as: technical-economic analysis, statistical studies and mathematical models.

Part two of the standard refers to the stages and recommended phases for applying value analysis to research and planning for new products and the modernization of those in current production (see the chart below).

-- Stage I: Preparatory Measures
   Phase 1: Establishing the theme
   Phase 2: Organizing the work collective
   Phase 3: Preparing the methodology
   Phase 4: Preparing the work plan
   Phase 5: Approving the work plan

-- Stage II: Analyzing the Social Requirements
   Phase 1: Collecting information
   Phase 2: Establishing the list of functions and the limits of their technical dimensions
   Phase 3: Establishing the levels of importance of the functions

-- Stage III: Analysis and Evaluation of the Existing Situation
   Phase 1: Technical sizing of the functions
   Phase 2: Economic sizing of the functions
   Phase 3: Systematic sizing of the functions
   Phase 4: Establishing the directions of research

-- Stage IV: Design or Redesign of the Product
   Phase 1: Drawing up proposals to make the new product or modernize it
   Phase 2: Selecting proposals
   Phase 3: Developing and finalizing proposals at the section level
   Phase 4: Evaluating the solutions

[Chart continued on next page]

-- Stage V: Approval of the Optimum Solution

-- Stage VI: Carrying out and Reviewing the Application
   Phase 1: Establishing the program for execution
   Phase 2: Achieving the approved solutions
   Phase 3: Evaluating the results after application

The techniques and work procedures, as well as the depth of study of the application stages and phases of value analysis are established by the work collective, keeping in mind: the complexity of the product under study, the size of the production run, technical, economic and organizational limitations of the units involved.

The fact that the research-design theme of the product undergoing value analysis (a theme which must specify the object, objectives, restrictions and level of details) is established in accordance with the approved technical plan ensures directing attention towards the principal directions of updating and modernizing the products, as determined according to the needs of the national economy and export demands.

Thus, the object (the product or a part of it that fulfills one or more functions) is selected having in mind, mainly: the complexity of the product; the size of the production run; the percentage in the volume of the unit's production; the necessary amount for the domestic and foreign markets; the importance of the product for the national economy, the economic branch or the unit; the need to ensure the growth of labor productivity, profitability, quality of the product and its competitiveness on the foreign market; the hard currency requirements to produce the product; ergonomic and social considerations; and, the possibilities for spreading certain solutions having an increased economic efficiency.

Sometimes, even when a good part of these criteria are met, in the application of value analysis restrictions can appear that can make the method inoperative or ineffective under certain aspects that can take precedence at that moment. For example, when the use of value analysis would lead to a failure to respect the production schedules of the project or the schedule for introducing the product into production; when it would reduce the use value of the product under the minimum allowable level; when the new solution would require using certain scarce raw materials or materials; when the minimum profit would not be made; when it would exceed the maximum limit for material costs and/or, in general, production costs, investment costs, product price, design costs and so forth. These restrictions are specified in the theme.

It is necessary that in the research and design collective, headed by the person responsible for the research theme or the chief of the production project, who has full responsibility for applying the method and the quality of the results obtained, specialists take part who can influence not only the concept of the product, but also the possibilities for production, costs, quality and sales. For this reason, the standard

recommends that in the work collective there should be included, alongside the product designer, research specialists, construction and technological specialists and other specialists knowledgeable in production problems in the sections and workshops, specialists in the field of sales, marketing, service, product quality, ergonomy and labor studies, as well as mathematicians and specialists in the computer field and so forth. It is in itself understood that there must be included someone specializing in value analysis. And, it is necessary for the entire collective to have a methodological preparation, either before beginning the work for all the stages and phases of work or before each one of these stages and phases.

In the collective's work plan, completed in correlation with the technical plan provisions, the tasks, timeframes and responsibilities are defined. Similarly, the material and financial means, as well as the necessary collaboration, can also be specified.

Of special importance in the stage of analyzing the social requirements, as well as throughout the entire time of drawing up the value analysis, are the collection and interpretation of the necessary information referring to conception, production, supply, sales, costs and product use, as well as the use of other products with a similar destination made in our country or abroad. This information can be obtained by investigating the requirements of the users and by studying technical, economic and commercial documents, specialized technical literature, standards, prospectii, catalogues and samples and similar products, as well as by consulting with the best specialists.

The parctice of applying the method has shown that the functions that the product must have must be clearly, homogeneously, concisely and precisely formulated to reflect all the essential features through which the product can satisfy the user's requirements and correspond to certain functional conditions imposed by the environment. For the purpose of determining the contribution of each of them to the use value, the levels of importance are established for the functions of the product, comparing the functions among themselves, two-by-two, from the point of view of their useful effect (on the basis of consulting a representative sample with the users and specialists or through other procedures). The list of functions is completed with the limits of the technical dimensions and the levels of importance of the functions.

The technical dimensions of the functions must reflect as exactly as possible the features expressed in the functions of the product. For a new product, they are established on the basis of reviewing the data resulting from an investigation of the user's requirements against the technical and construction parameters of similar existing products, as well as against specialized technical literature. For an existing product, they are expressed through the technical parameters of the product, as

outlined in technical documentation or determined by direct measurement. The subjective functions are sized by estimates, using diverse techniques, statistical-mathematical, sociological and experimental procedures and so forth.

The results of the technical sizing of the functions are synthesized in a table showing: the functions, technical dimensions (name, unit of measure, value) and level of importance. The afferent costs of the component elements of the product (items, operations), which form the functions of the product, are recorded in another table, distributing them to one or more of the functions of the product according to the degree of involvement of these elements in the making of the product. The economic sizing of each function results from the totalling of the costs of the component elements which constitute the function.

After the systematic analysis of the functions (an analysis of the manner in which the existing product, its functions, technical parameters and constructive solutions satisfy the real needs of the product user; the evaluation of the constructive and technological solutions possible for the realization of the functions under conditions of eliminating non-useful elements and costs; the comparison of the level of costs of the functions with their level of importance; and, the comparison of the functions of the existing product and their technical dimensions and costs with those of similar high performance products), the directions of research can be determined, establishing: which functions must be added or eliminated from the existing product; what corrections must be made to the technical dimensions of the functions; which component elements can be eliminated since they have no functional role; which functions have disproportional costs compared to their percentage in the use value; what are the ways of eliminating these disproportions.

An investigation into the users can reveal a wide spread of requirements regarding the functions of the product and their technical dimensions. Such situations can direct the collective toward studying the possibilities of diversifying the existing product.

In drawing up the proposals for bringing about the functions of the product in the design or redesign of the product, the standard recommends using diverse creative methods and techniques: combination analysis, check lists, brainstorming, synectics and so forth. The proposals, in the form of ideas and sketches, are recorded to be used in the following stages and, at the same time, are checked to see if they are possible from a technical and economic point of view and to what degree they contribute to attaining the established objectives. Those which can be achieved and correspond to the objectives are retained by the work collective, which combines and develops them, eventually verifying them by making models, experimental

mock-ups or laboratory tests, finalizing them in the form of studies or drafts accompanied by a preliminary calculation of the economic efficiency. The proposed solutions are evaluated from the point of view of constructive compatibility and fulfillment of the functions of the product (determining their technical and economic dimensions and costs). Similarly, they check whether they deviate from the restrictions established in the theme.

For the purpose of selecting the optimum solution on the basis of the criterion of maximizing the relationship between the use value and the production costs, the solutions are compared (in the case of new products, after the analysis of the social requirements). The means of approving the optimum solution are the ones outlined by legal provisions for studies and projects on new or modernized products.

Keeping in mind the attributes granted by law to the collective leadership organs of enterprises and institutes in connection with the modernization of existing products and the production of new ones, the standard calls for the responsibility of these organs with regards to approving the collective's work plan for applying value analysis, reviewing the achievement of the plan's provisions and approving the program for achieving and homologating the new solutions.

In conclusion, it must be emphasized that in the elaboration of the standard, with all the difficulties related to the fact that a central organ has not yet been given the responsibility of guiding and pursuing in an organized and systematic manner the action of spreading the use of value analysis, the Central Institute for Management and Information has enjoyed the assistance and special contributions of the specialists in the County Office of Economic-Social Organization in Cluj, the "Stefan Gheorghiu" Academy, the Academy of Economic Study, the Romanian Institute of Standardization, within the framework of collective work that trained specialists from over 80 research-design institutes, educational institutes and from certain ministries and central organs.

Parallel with the continuation of the elaboration of the other parts of the standard referring to other fields of application of the method by the National Council for Science and Technology, through the Romanian Institute of Standardization, we feel that the rapid extension of the use of value analysis is conditioned, first of all, by training as many specialists in the field as possible and by broadly understanding the experience accumulated in our country and in the economically developed countries and the specialized literature. We have in mind: the need to write a Romanian manual on value analysis for both the training of cadre in research, design and production and for the use of faculty personnel and students in higher technical and economic education; the contribution that the National Institute for Information and Documentation can make by presenting studies and application from abroad; the continuation of the valuable cycle of

articles that have appeared over the last three years in REVISTA ECONOMICA and by the publication of certain examples of the application of the method to products on the basis of the provisions in the standard. Likewise, it would be especially useful to organize a seminar (eventually with international participation) to carry out a broad exchange of experiences and ideas and that is capable of offering elements to continue to improve the method and to put into action the Special Program for spreading the use of value analysis throughout the entire economy.

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UNDERUTILIZATION OF BIOGAS ENERGY POTENTIAL CRITICIZED

Bucharest REVISTA ECONOMICA in Romanian No 16, 20 Apr 79 pp 13-14

/Article by Cristian Popescu/

/Text/ In most of the world's states the energy crisis has brought the initiation of broad actions aimed at drawing new energy sources into economic circulation. These actions, included in current and long-range national plans and drawing researchers and specialists from various areas, at the same time involving important material and financial efforts, and their effectiveness are directly affecting the very parameters of development. A central place in the context of the concerns mentioned is held by the steadfast broadening of the range of nonconventional energy resources as well as the continued improvement in technologies which would permit the exploitation of these sources under conditions of maximum efficiency. Alongside the areas such as solar, wind, marine, water and geothermal energy and so forth, scientific research is utilizing newer and newer sources of energy. Among these is fermentation gas (biogas), which, although called for relatively late by the specialists, is proving to be a valuable and easily exploitable source of energy.

According to some preliminary estimates, the biogas potential which can be obtained by various means at the level of the national economy rises to 600,000 cubic meters per day which is equal to saving 420,000 cubic meters of methane gas daily.

A special advantage offered by this generous energy source also is the possibility of being utilized technologically in the installations where it is produced itself, thus eliminating the consumption of other types of fuels, transporation expenses and so forth. At the same time, as a product of the fermentation of active sludge from used city water and the food industry and a product of the fermentation of animal waste in the zootechnical complexes, biogas is--and to a greater extent can be--an important element in the conception of technologies which, at the same time, assure energy and environmental protection. Of course, the fact that biogas is the result of the fermentation process of sludges and animal waste has been known a long time. The restrictions imposed by the energy crisis, however, shed totally new

light on this secondary product whose value has been underestimated. Biogas today may be considered one of the efficient sources of energy supply and world practice proves it.

Biogas has a caloric power of around 5,500 kilocalories per cubic meter. Currently it is being utilized as a fuel in the thermoelectric power centrals. This, however, is an incomplete utilization of its energy potential, with superior utilization involving the transformation of caloric energy into a higher-ranking energy--that is, electric energy. However, let us follow in a broad sense how this energy source is assured and, in particular, how it is being utilized.

Two Aspects of Dissipation: The Waste of Biogas and the Consumption of the Classic Fuels

An important way to obtain biogas--and the only one utilized at all until now--is the fermentation of sludge contained in used city water, water subjected to a filtration process in special installations. The first phase in the filtration technologies is the mechanical step where, through a process of sedimentation, a separating of the solid mass contained in the residual water is achieved. The resultant product--an active sludge with a high content of organic substances--is a pollutant due to the pathogenous agents it contains.

In order to deactivate the sludge, the technological process provides for the step of biological filtration, which is carried out through fermentation of it in tightened reservoirs (methane tanks) following which a process takes place of mineralization of the organic mass and a process of neutralization of the pathogenous agents. This anaerobic fermentation of the sludge is accompanied by the production and freeing of a large quantity of biogas (100 cubic meters per ton of active sludge). The volume of biogas which could result from the fermentation of all the sludge captured in the filtration stations of the populated centers* exceeds the minimum volume of 100,000 cubic meters of biogas daily, according to some calculations.

The above calculation includes all the 337 city filtration stations currently in operation. However, we should mention that only the large filtration stations (with a flow of over 200 liters of used water per second) are provided with methane tanks through technology. Those in the smaller localities also achieve mineralization of the sludge through fermentation; however, this time we must cope with an aerobic fermentation, a process occurring in the open basins at the temperature of the environment. Under these conditions not even the installations permitting the capture and utilization of the biogas resulting from fermentation have been devised. As such the biogas is freed into the atmosphere without any concern having existed until now with utilizing it efficiently.

As I was pointing out, the problem of utilizing biogas for technological purposes has been posed, however, for the large filtration stations supplied with methane tanks, where the sludge must be warmed to a constant temperature

* The quantity of sludge for a city with 100,000 residents is around hundreds of tons daily.

of 32-33°. Since biogas can assure and replace the fuel needed for this purpose, the particular stations have been supplied with installations for captation, storage and combustion of the biogas. Under normal operating conditions, the 40 big city stations would have to produce a quantity of around 65,000 cubic meters of biogas a day. But how much is really being produced?

An analysis made by the Research and Design Institute for Water Management shows that only eight filtration stations are capturing and utilizing biogas for technological purposes. The other stations, which do not use the fermentation gas as fuel, inevitably consume large quantities of other kinds of fuel--tens of thousands of tons a year—to which the attached expenses are added. So a paradoxical situation has beenkept for a long time: On one hand an energy source is being wasted for the production of which supplementary investments are not needed and, on the other, large quantities of classic fuels are being consumed.

Our investigation has brought out that many filtration stations cannot capture and utilize biogas since they have not been supplied by construction with the necessary installations--gas meters. So, at that particular time, the very indica ions of the designers were not taken into consideration; they haveprovided for each project installations for captation, storage and combustion of the biogas, through the operation of which the utilization of the energy potential of the fermentation gas is assured. At that particular time calculations of superficial efficiency were made; they felt that the savings in investments obtained by rejecting the installation of gas meters were more timely and they failed to take into account the large savings that the utilization of biogas could have brought them in time. Due to such simplistic calculations, account was not taken for years of the demand for the rational utilization of all the energy resources, which has led to a harmful consumption of classic fuels--hundreds of thousands of tons--directly affecting the country's balance of energy.

Extending Valuable Experience to All Romania's Counties

The fact that the concerned organs like the people's councils but also the ministries and general organs called on to be directly responsible for assuring Romania's need for energy under economical conditions have not been concerned with designating an enterprises to product the metallic part which enters into the construction of gas meters--the cap--in turn has created difficulties in total fulfillment of the investments. And other causes have contributed to an important extent to the underutilization of the biogas' energy potential: construction defects which affect the tightness of the methane tanks so that large quantities of biogas cannot be captured, incorrect exploitation of the installations which is below the technological standard provided and so forth.

The responsible factors directly involved--the city people's councils--have a decisive role in resolving these situations. In this way, through good operation, the Iasi Municipality filtration station, which actually proves the sustained concern from local organs in this regard, for several years has been assuring thermal autonomy through the utilization of biogas. Extending

the station according to the city's industrial and urban development, in accordance with the estimation of local factors, will allow the surplus biogas to assure the operation of a station of asphalt blends by 1980, a small greenhouse as well as heating for 200 apartments through the thermification network.

The situation of other filtration stations--the ones in Brasov, Ploiesti, Giurgiu and so forth which, although they all have the necessary installations,utilize the biogas produced only to a small extent or not at all due to incorrect exploitation--proves the lack of concern from the responsible factors with assuring the saving of energy in this way, too. Each day, each hour that the installations fail to operate equal a waste of a large energy potential and, at the same time, equal the consumption of quantities of classic fuel which could be directed toward covering other needs of the economy.

Utilization of the energy potential of the biogas produced in the filtration station, above all, means supplying it with the particular installations; at the same time, it is necessary to remedy the construction defects as well as to operate all the installations at the parameters designed. Also, in order to assure effective progress in the utilization of biogas, we feel it is necessary for the Ministry of Material-Technical Supply to keep under strict control the quotas of classic fuels allocated to the filtration stations, seeking rapid thermal autonomization of all of them.

As I was pointing out, economic-technical studies and practice prove that under good operating and exploitation conditions a station for the filtration of used city water produces a quantity of biogas which exceeds its technological need, with the surplus from this gas capable of being utilized by other consumers in the economy. Thus, these stations can become a real and important generator of energy.* The increase in the quantity of biogas obtained in the filtration stations from the same quantity of sludge subjected to deactivation primarily requires better exploitation of existing technologies. It is a process involving the intensification of biochemical process and recovery of all the energy from the fermenting material. At the same time it should be stated that, differing from the classic, exhaustible energy resources, fermentation gas is a source which grows continually; we have in mind the increasingly greater number of industrial enterprises utilizing organic substances and the zootechnical complexes, the increase in rural and urban locations and so forth.

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* It is felt that under current conditions, through efficient exploitation, we could anticipate a surplus of a minimum 30 percent of the biogas resulting from the process of the fermentation of sludge; this surplus, however, varies according to the season and depending on the content of sludge in the organic substance.

Several conclusions need attention at the end of this investigation. Superior utilization of the energy potential of biogas, a resource whose exploitation actually does not require supplementary investments, can permit covering the needs for thermal and electric energy of the filtration stations, thus reducing the energy balance. At the same time, the surplus biogas could be utilized to cover other local energy needs: enterprises, greenhouses, housing and so forth, depending on the size of the station and surplus biogas it produces. The main obstacle in the way of utilizing biogas, a process greatly delayed, results from the fact that some factors in the economy have not fully understood the implications of the energy crisis and the vital importance of rational exploitation of all the energy resources the economy has available.

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POPULATION, EMPLOYMENT DATA FOR PRISTINA OPSTINA, 1978, 1979

Pristina JEDINSTVO in Serbo-Croatian 12 Jul 79 p 8

[Excerpts] Pristina Opstina covers more than 85,000 hectares, about 33,000 of which are arable land, and the rest, forest and pasture. This area, especially its center has noted an increased rate of development in agriculture and industry from year to year. There has also been a high increase in the population, both as a result of natural increase [i.e., births] and because of the large migration from village to city.

The 1978 population of the opstina was 200,000, representing an increase of about 7,000 from the previous year. The city of Pristina alone had 104,800 inhabitants.

This [the city's] population growth is continuing also this year. By the end of the year it will have increased by 6 percent, or by about 6,300 persons, bringing the city's permanent population to more than 111,000. There are also an additional 40,000 inhabitants (students, seasonal workers, etc.) who live here from 6 to 9 months of the year.

Last year young people under 19 years of age accounted for 51.8 percent of the population of the opstina, and numbered 103,000; this year the number is expected to be considerably higher.

In 1978 the number of employable inhabitants was 82,000, and this year it is expected to be 86,200. Most of these are younger and are being supported by other persons; a very large number of families are supported by only one family member.

The employable population in agriculture numbers only 9,000, and this will decline with the increased number of persons leaving rural areas. The secondary and tertiary sectors of the economy are assuming a dominant role in the structure of the economy of this opstina.

According to the Institute for Economic and Social Development, 49,892 persons were working in Pristina opstina in 1978, including 35,121 in the economic sector, particularly industry and mining. The number of persons

who got jobs in the opstina last year numbered 2,409, which is satisfactory when compared to previous years.

In the first 3 months of this year organizations of associated work in this opstina reported 1,529 job vacancies, or a monthly average of 509 jobs, which is 9.6 percent more than in the same 1978 period. The greatest need (73.8 percent) was for skilled and highly skilled workers, then semi-skilled with secondary school education and for unskilled workers, while the need was less for workers with advanced education. Efforts have been made to place people in jobs outside this area, but people often do not accept work outside their place of residence.

CSO: 2800

ENERGY CONSUMPTION PROJECTED TO 2000

Zagreb NAFTA in Serbo-Croatian No 5, May 79 p 244

[Text] Table 1. Consumption of Energy in the SFRY

(1) Godina	(2) Potrošnja		(5) Specifična potroš. kg EU/1000 din
	(3) Ukupna	(4) Finalna	
	10^6 t EU		
1965.	21,3	16,9	233,3
1970.	28,2	21,2	227,6
1975.	37,9	27,7	219,8
1985.	72,3— 74,9	52,8— 55,3	213,1—220,8
1990.	95,5—100,0	67,0— 73,4	210,4—220,3
2000.	158,6—170,4	106,3—124,2	204,7—219,8

Key:

1. Year
2. Consumption
3. Total
4. Final
5. Specific consumption, kg EU/1000 din

Table 2. Structure of Energy Consumption in the SFRY

	(1) Primarni nosilac energije	(2) Jedinica mjera	Godina		
			1985.	1990.	2000.
(3)	Ugljen — kameni	10^6 tona	6	7	10
	— mrki	"	12	12	12
	— lignit	"	49—58	68—84	162—203
(4)	Nafta	"	21	27	38
(5)	Prirodni plin	10^9 Nm^3	4	10	18
(6)	Hidroenergija	10^9 kwh	40	50	50
(7)	Nuklearna energija	"	9	18	72

Key:

1. Primary energy sources
2. Unit of measure
3. Coal--hard
   brown
   lignite
4. Oil
5. Natural Gas
6. Hydro-energy
7. Nuclear energy

Table 3. Total Energy Consumption in SFRY When Appropriate Rationalization Measures are Applied

Godina	(1) Varijanta	Specifična potrošnja kg/1000 din	(2) Ukupna potrošnja 10^6 t	(3) Moguće uštede 10^6 t
			(4) u ekvivalentu ugljena	
1975.		219,8	37,9	—
1985.	Konstantna vrijednost (5)	219,8	74,6	—
	smanjenje zbog strukturnih promjena (6)	206,8	70,1	3,5
	smanjenje zbog mjera štednje (7)	197,8	67,1	7,5
2000.	Konstantna vrijednost	219,8	170,4	—
	smanjenje zbog strukturnih promjena	195,6	151,7	18,7
	smanjenje zbog mjera štednje	142,9	110,8	59,6

Key:

1. Variants
2. Total consumption
3. Possible savings
4. In coal equivalent
5. Constant value
6. Reduction because of structural changes
7. Reduction because of saving measures

Table 4. More Rational Consumption of Energy in SFRY With the Application of Specific Measures

Godina	(1) Ukupna ušteda 10^6 t u ekvivalentu ugljena		(4) od toga alternativno Goriva — u naturalnim jedinicama			
			(5) Lignit 10^6 t	(6) Nafta 10^6t	(7) Ulje za lož. 10^6 t	(8) Prir. plin 10^9 Nm^3
1985.	— Smanjenje zbog strukturnih promjena (2)	3,5	11,3	2,3	2,4	2,9
	— maksimalna mjera štednje (3)	7,5	24,3	5,0	5,2	6,2
2000.	— Smanjenje zbog strukturnih promjena	18,7	60,5	12,5	12,9	15,6
	— maksimalnih mjera štednje	59,6	192,9	39,7	41,1	49,7

Key:

1. Total savings 10^6 t in coal equivalent
2. Reduction because of structural changes
3. Because of maximum saving measures
4. Of this, alternatively Fuel--in natural units of measure
5. Lignite
6. Oil
7. Heating oil
8. Natural gas

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AGREEMENT ON 1976-80 FUEL PRODUCTION SIGNED; 1985 PLANS

Belgrade PRIVREDNI PREGLED in Serbo-Croatian 24 Jul 79 p 2

[Excerpts] When almost all hope had been lost that the agreement on oil and gas production and processing in the 1976-80 period would be signed, the latest moves on the world market brought together the interests of the individual republics and provinces and this agreement was signed the end of last week.

Most of the views essentially remained in the agreement as they had been originally proposed. Even the production and consumption amounts remained the same as in the medium-term plan and were not modified as had been expected. As noted, 4.6 million tons of oil will be produced in 1980, and 18.5 million tons consumed; signers of the agreement believe that the latest rationalization measures for oil consumption will keep consumption within the planned level.

In 1985 6 million tons of oil is to be produced and 26 million tons consumed. Capacities are already being built to process this amount and will be completed much before this deadline, thus more will be processed than is needed. The agreement says that by 1980 Yugoslavia will have refinery capacities to process 31.9 million tons of oil.

The agreed-upon amounts in regard to gas production and consumption even now seem a bit unrealistic, because construction of the eastern section of the Yugoslav gas pipeline is behind schedule, thus disrupting consumption and slowing domestic production. In 1980 3 billion cubic meters of natural gas is to be produced (not including 400 million cubic meters of gas to be produced from Kosovo coal) and 6 billion cubic meters consumed. A few days ago an agreement was signed on delivering gas from the USSR through Hungary for the eastern section of the gas pipeline; construction of the part to be built through Serbia has just started, while construction of the part through Macedonia is still uncertain. Considering that imported gas must be accepted, whether our capacities are ready or not, it is entirely possible, if work is not accelerated very much, that we will be forced to reduce exploitation of our own sources.

Many doubt that the planned quantities of domestic natural gas can be produced in general on time, also because of the fact that the domestic price is almost 3 times lower than that for imported gas. In such a situation little is left to allocate for exploration and exploitation of new sources.

The most disputed points, namely, 7 and 8, on which republics and provinces had spent much time and which had been the main obstacles to signing the agreement, were resolved. By 1980 Bosnia-Hercegovina will have capacities for refining 4.2 million tons of oil, as had been originally planned, Macedonia will have capacities for processing 2.5 million tons, Slovenia 2 million tons, Vojvodina 8.5 million tons, and Croatia 14.7 million tons. According to this, Slovenia will have capacities for refining only 800,000 more tons of oil than originally proposed, but not 8 million more tons which is how much this republic had requested. Serbia also renounced its desire to begin building refinery capacities in this medium-term plan. It is obvious that more realism prevailed.

In regard to gas consumption, only one thing was changed; namely, the persistent request by Macedonia to participate in the distribution of imported gas was accepted. The agreement says that Macedonia will get 700 million cubic meters. The fact was disputed that Macedonia had not been included early enough in the agreed-upon purchase of the 3 billion cubic meters of gas to be imported annually from the USSR and that the program for constructing the eastern section of the Yugoslav gas line had not foreseen a branch to Skopje. Macedonia's request was made only later and it is not yet confirmed that the planned branch line will be built in its area on time. Nevertheless, negotiations are in progress on providing the additional quantities of imported gas which will be needed when construction of the 2,814-kilometer-long Yugoslav pipeline is completed, as foreseen in the agreement.

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BRIEFS

CROATIAN RETURNEES--The executive council of the Croatian Assembly recently heard a report on the program of measures and action being taken to employ our workers who return from abroad. Of the 800,000 Yugoslavs working abroad at the end of last year, about 32 percent were Croatians. Every year the number of our returnees increases. As a whole, efforts made in the republic to further their employment here are not yet satisfactory. At the beginning of 1978 Zagreb Opstina issued a program for employing returnees which was quite successfully realized. The employment bureau made available 50 million dinars to open new jobs in the small-scale economic sector. Also, 150 basic organizations of associated work were surveyed on employing a specific number of returnees. An agreement was also worked out with 88 signers on promoting the small-scale economy, establishing industrial-service facilities in neighboring opstinas. In all opstinas greater importance has been given to developing the small-scale economy. Programs of rural development to increase employment of returnees have been worked out in Osijek, Varazdin, and Gospic opstinas. About 500 returnees have been employed in agricultural production in Varazdin Opstina. [Excerpts] [Belgrade PRIVREDNI PREGLED in Serbo-Croatian 31 Jul 79 p 2]

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